

# North Carolina Highway Bulletin

Vol. II

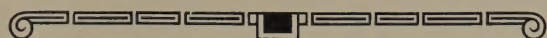
APRIL, 1921

No. 2



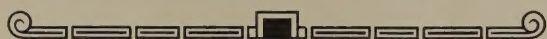
CONCORD-ALBEMARLE HIGHWAY, CABARRUS COUNTY, FEDERAL AID PROJECT No. 52





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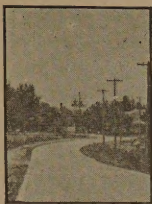
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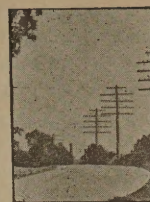
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204-206 West Lee Street  
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# NORTH CAROLINA HIGHWAY BULLETIN



Vol. II, No. 2

H. K. WITHERSPOON, Editor

APRIL, 1921

## North Carolina's Good Road Law

**A**N ACT TO PROVIDE FOR THE CONSTRUCTION AND MAINTENANCE OF A STATE SYSTEM OF HARD-SURFACED AND OTHER DEPENDABLE ROADS CONNECTING BY THE MOST PRACTICABLE ROUTES THE VARIOUS COUNTY-SEATS AND OTHER PRINCIPAL TOWNS OF EVERY COUNTY IN THE STATE FOR THE DEVELOPMENT OF AGRICULTURE, COMMERCIAL AND INDUSTRIAL INTERESTS OF THE STATE, AND TO SECURE BENEFITS OF FEDERAL AID THEREFOR, AND FOR OTHER PURPOSES.

*The General Assembly of  
North Carolina do  
enact:*

SECTION 1. That chapter one hundred and eighty-nine of the Public Laws of North Carolina, session one thousand nine hundred and nineteen, be amended so as to hereafter read as follows:

### GENERAL PURPOSES OF THE ACT

SEC. 2. The general purposes of this act are for the State to lay out, take over, establish and construct, and assume control of approximately 5,500 miles of hard-surfaced and other dependable highways running to all county-seats, and to all principal towns, State parks, and principal State institutions, and linking up with State highways of adjoining States and with National highways into National Forest Reserves by the most practicable routes, with special view of development of agriculture, commercial, and natural resources of the State, and for the further purpose of permitting the State to assume control of the State highways, repair, construct, and reconstruct and maintain said highways at the expense of the entire State, and to relieve the counties and cities and towns of the State of this burden.

### PURPOSE AND INTENT OF ACT—HARD-SURFACED ROADS AND MAINTAINING SAME

SEC. 3. That the purpose and intent of this act is to establish a system of State highways for the State, hard-surfacing said highways as rapidly as possible, and maintaining the entire system of said highways in the most approved manner as outlined in this act. Work on the various links in the State highway system shall be of such a character as will lead to ultimate hard-surfaced construction as rapidly as money,

labor, and materials will permit, and to a State system of durable hard-surfaced, all-weather roads, connecting the various county-seats, principal towns, and cities.

### ESTABLISHMENT OF THE COMMISSION

SEC. 4. That a State Highway Commission is hereby created, to consist of a chairman from the State at large, who shall be a practical business man, and who shall be known as the State Highway Commissioner; and nine (9) commissioners, one from each construction district as hereinafter

designated, three of whom shall be of the minority political party, one for each of the three terms, all to be appointed by the Governor, such appointments to be confirmed by the Senate. The State Highway Commissioner of the existing Highway Commission and all other commissioners whose terms do not expire on April first, one thousand nine hundred and twenty-one, shall hold office during their present unexpired terms. At the expiration of the present term of the chairman, and any commissioner whose term has not expired, his suc-

cessor shall be appointed by the Governor for a period of six years, such appointment to be confirmed by the Senate. That two of said commissioners shall be appointed for two years from April first, one thousand nine hundred and twenty-one; three of said commissioners shall be appointed for four years from April first, one thousand nine hundred and twenty-one; three of said commissioners shall be appointed for six years each, such appointments to be confirmed by the Senate: *Provided*, that any commissioner appointed or elected under this act may be removed by the Governor for cause. In case of the death, resignation, or removal from his district of any commissioner during his term of office, his successor shall be appointed by the Governor from the same construction district and from the same political party in which the vacancy occurs to fill out his unexpired term, such appointment to be confirmed by the next Senate. At the expiration of the term of the chairman, and the various commissioners, their successors shall be appointed by the Governor for a term of six years each, such appointments to be confirmed by the Senate. The State Highway Commissioner shall devote his entire time



THE FATHERS OF THE BILL

REPRESENTATIVE H. G. CONNOR, JR., OF WILSON COUNTY; REPRESENTATIVE R. A. DOUGHTON, OF ALLEGHANY COUNTY; REPRESENTATIVE T. C. BOWIE, OF ASHE COUNTY



and attention to the work of the commission and receive as compensation and salary therefor fifty-five hundred dollars (\$5500) per annum, payable monthly, and his actual traveling expenses when engaged in the discharge of his duties. Said State Highway Commissioner shall be vested with all the authority of said commission when same is not in session. The members of the State Highway Commission, other than the chairman of the commission, shall each receive ten dollars (\$10) per day while engaged in the discharge of the duties of their office, and their actual traveling expenses. The headquarters and main office of the State Highway Commission shall be located at the State Capitol. The members of the said commission, at their first meeting, shall organize and adopt a common seal; they shall keep minutes of their meetings, which shall be open to public inspection; they shall have the power to adopt and enforce rules and regulations for the government of their meetings and proceedings, and for the transaction of the business of the commission; and shall have the power and authority to make all rules and regulations for carrying out the true intent and purposes of this act. They shall meet at the offices of the commission at such regular times, not less than quarterly, as they may by rule provide, and may hold special meetings at any time and place at the call of the chairman, or any five members. The first meeting of the commission shall be at the call of the Governor as soon as practicable after the ratification of this act.

#### STATE HIGHWAY ENGINEER AND OTHER EMPLOYEES

SEC. 5. The said commission, at its first meeting or as soon thereafter as practicable, shall employ a State Highway Engineer, who shall be a competent civil engineer, qualified by technical training as well as practical construction experience in highway work. The engineer shall hold office during the pleasure of the commission, but not to exceed a period of four years without reappointment. He shall receive an annual salary to be fixed by the State Highway Commission, approved by the Governor, payable in monthly installments, together with such actual and other necessary expenses as may be incurred in the official discharge of his duties. Said commission shall prescribe and fix the duties of the engineer, and shall provide the engineer with offices and sufficient equipment to discharge his duties as prescribed by the State Highway Commission and this act. The commission shall employ such other engineers, clerks, and assistants as may be needed, and at such salaries and for such terms as appear necessary, and prescribe and fix their duties. In the discretion of the commission, such offices may be established in the construction districts as may be necessary to carry out the provisions of this act.

#### OATH AND BONDS OF COMMISSIONERS AND ENGINEERS

SEC. 6. The members of the State Highway Commission and State Highway Engineer shall each, before entering upon the discharge of his duties, take an oath that he will faithfully and honestly execute the duties of the office during his continuance in office, and each give a bond, to be fixed and approved by the Governor, conditioned upon the faithful discharge of the duties of his office and the full and proper accounting for all public funds and property coming into his possession or under his control. The premium on said bond or bonds shall be paid out of the State Highway Fund.



THE PILOT OF THE HIGHWAY  
SHIP

STATE HIGHWAY COMMISSIONER  
FRANK PAGE, WHO WILL CONTINUE  
AS CHAIRMAN OF THE NEW  
COMMISSION

#### FIVE THOUSAND FIVE HUNDRED MILES (APPROXIMATE) TAKEN OVER FOR THE STATE HIGHWAY SYSTEM—METHOD

SEC. 7. Fifty-five hundred (5500) miles shall be the approximate maximum limit of mileage of the State highway system. The designation of all roads comprising the State highway system as proposed by the State Highway Commission shall be mapped, and there shall be publicly posted at the courthouse door in every county in the State a map of all the roads in such county in the State system, and the board of county commissioners or county road-governing body of each county, or street-governing body of each city or town in the State shall be notified of the routes that are to be selected and made a part of the State system of highways; and if no objection or protest is made by the board of county commissioners or the county road-governing body of any county, or street-governing body of any city or town in the State within sixty days after the notification before mentioned, then and in that case the said roads or streets, to which no objections are made, shall be and constitute links or parts of the State highway system. If any objections are made by the board of county commissioners or county road-governing body of any county or street-governing body of any city or town, the whole matter shall be heard and determined by the State Highway Commission in session, under such rules and regulations as may be laid down by the State Highway Commission, notice of the time and place of hearing to be given by the State Highway Commission at the courthouse door in the county, and in some newspaper published in the county, at least ten days prior to the hearing, and the decision of the State Highway Commission shall be final. A map showing the proposed roads to constitute the State highway system is hereto attached to this bill and made a part hereof. The roads so shown can be changed, altered, added to or discontinued by the State Highway Commission: *Provided*, no roads

shall be changed, altered or discontinued so as to disconnect county-seats, principal towns, State or National parks or forest reserves, principal State institutions, and highway systems of other States. The rights of way to all roads taken over under this act shall be not less than thirty (30) feet: *Provided*, that no toll road shall be taken over under this section unless by agreement or condemnation as herein provided.

#### COMMISSION ASSUMING CONTROL

SEC. 8. Within sixty days after the ratification of this act, the State Highway Commission shall commence to assume control of the various links of road constituting the State highway system, and shall complete the assumption of control of all the roads which constitute the State highway system as rapidly as practicable.

SEC. 9. (a) After the selection of a part or parts of the State highway system, the commission may cause roads, comprising such system, including connecting streets in incorporated towns and cities, to be distinctly marked with some standard design placed on convenient objects along such routes. Such design shall be uniform on all parts of the State highway system, except that the numbers thereon shall correspond with the numbers given the various routes by the commission, which numbers shall coincide with the numbers placed on the official map or maps issued by the commission. No similar design shall be used for marking other routes in North Carolina.



## GUIDE AND WARNING SIGNS

(b) After selection of State highways before mentioned, the commission may cause to be erected such standard guide or warning signs as it may deem necessary along the State highway system. Such signs shall be of uniform design throughout the State, and it shall be unlawful for any person to erect or display any other guide or warning signs upon said highway except in case of emergency, or with the approval of the commission, and, if erected without such approval they may be removed by the commission, and any violator of this section shall be subject to all penalties herein-after provided.

## DIRECTING SIGNS

(c) After taking over section or sections of the State highway system, the commission may erect proper and uniform signs directing persons to roads and places of importance.

(d) Said commission shall have the power to control all signs within the right of way of State highways.

## POWERS OF STATE HIGHWAY COMMISSION

SEC. 10. The said State Highway Commission shall be vested with the following powers:

(a) The general supervision over all matters relating to the construction of the State highways, letting of contracts therefor, and the selection of materials to be used in the construction of State highways under the authority of this act.

(b) To take over and assume exclusive control for the benefit of the State of any existing county or township roads, and to locate and acquire rights of way for any new roads that may be necessary for a State highway system, with full power to widen, relocate, change, or alter the grade or location thereof; to change or relocate any existing roads that the State Highway Commission may now own or may acquire; to acquire by gift, purchase, or otherwise any road or highway that may be necessary for a State highway system: *Provided*, that nothing in this act shall be construed to authorize or permit the Highway Commission to allow or pay anything to any county, township, city, or town, or to any board of commissioners or governing body thereof, for any existing road or part of any road heretofore constructed by any such county, township, city, or town, unless contract has already been entered into by the State Highway Commission.

(c) To provide for such road materials as may be necessary to carry on the work of the State Highway Commission, either by gift, purchase, or condemnation.

(d) To enforce by mandamus or other proper legal remedies all legal rights or causes of action of the State Highway Commission with other public bodies, corporations, or persons.

(e) To regulate the use of and police traffic on State highways, and prevent their abuse by individuals, corporations, and public-service corporations, by heavy vehicles, trucks, tractors, trailers, or other heavy or destructive vehicles or machinery, and unnecessary destruction incident to the laying of underground pipes.

(f) To establish a traffic census to secure information about the relative use, cost, value, importance, and necessity of roads forming a part of the State highway system, which information shall be a part of the public records of the State,

and upon which information the State Highway Commission shall, after due deliberation and in accordance with these established facts, proceed to order the construction of the particular highway or highways.

(g) To assume full and exclusive responsibility for the maintenance of all roads other than streets in towns and cities, forming a part of the State highway system from date of acquiring said roads: *Provided*, the commission may enter into contracts with counties as to the maintenance of highways which shall form a part of the State highway system. The State Highway Commission shall have authority to maintain all streets constructed by the State Highway Commission in towns of less than three thousand population by the last census, and such other streets as may be constructed in towns and cities at the expense of the State Highway Commission, whenever in the opinion of the State Highway Commission it is necessary and proper so to do.

(h) To give suitable names to State highways and change the names of any highways that shall become a part of the State system of highways.

(i) To cooperate with municipal or county authorities, civic bodies and individuals in the proper selection, planting and protection of roadside trees, shrubs and vines for the beautification and protection of said highways.

## FEDERAL AID

(j) That the said State Highway Commission shall have such powers as are necessary to comply fully with the provisions of the present or future Federal Aid Acts. The said Commission is hereby authorized to enter into all contracts and agree-

ments with the United States Government relating to the survey, construction, improvement and maintenance of roads under the provisions of the present or future Congressional enactments, to submit such scheme or program of construction or improvement and maintenance as may be required by the Secretary of Agriculture or otherwise provided by Federal Acts, and to do all other things necessary to carry out fully the cooperation contemplated and provided for by present or future acts of Congress, for the construction or improvement and maintenance of rural post roads. The good faith and credit of the State are further hereby pledged to make available funds necessary to meet the requirements of the acts of Congress, present or future, appropriating money to construct and improve rural post roads and apportioned to this State during each of the years for which Federal funds are now or may hereafter be apportioned by the said act or acts, to maintain the roads constructed or improved with the aid of funds so appropriated and to make adequate provisions for carrying out such construction and maintenance. The good faith and credit of the State are further pledged to maintain such roads now built with Federal aid and hereafter to be built and to make adequate provisions for carrying out such maintenance.

## REPAIR OF ROAD DETOUR

SEC. 11. It shall be mandatory upon the State Highway Commission, its officers and employees, or any contractor or subcontractor employed by the said commission, to select, lay out, maintain and keep in as good repair as possible suitable detours by the most practical route while said highways or

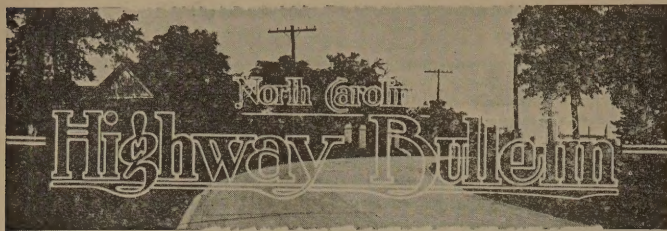
(Continued on page 11)



TWO OF OUR GOOD ROAD ADVOCATES

HON. HERIOT CLARKSON, OF CHARLOTTE, WHO DREW ORIGINAL DRAFT OF BILL; MISS HATTIE BERRY, SECRETARY OF NORTH CAROLINA GOOD ROADS ASSOCIATION, WHO HAS PERHAPS DONE MORE THAN ANY ONE PERSON IN THE STATE TOWARDS GOOD ROADS





PUBLISHED MONTHLY BY  
NORTH CAROLINA STATE HIGHWAY COMMISSION  
RALEIGH, NORTH CAROLINA

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R. A. DOUGHTON.....	Sparta
JOHN C. MCBEE.....	Bakersville
W. S. FALLIS, <i>State Highway Engineer</i> .....	Raleigh

Address all communications in regard to BULLETIN to the Editor, Box 1140, Raleigh, N. C.

This BULLETIN will be sent gratis to any State or county official, contractor, newspaper, trade publication, library, or other person interested in the improvement of roads and in the work of the Commission. Advertising rates may be obtained on application.

Volume II

APRIL, 1921

Number 2

## Editorials

Copies of the new State Road Law, together with the map of the State Highway System, may be obtained from the Editor.

—GOOD ROADS CONVENTION, GREENSBORO, APRIL 18-23—

Stanley County deserves a great deal of credit for the attractive manner in which her roads have been marked. Distinctive signs, painted in white letters on a red background, have been placed at road intersections, on dangerous curves and grades, while at the county lines "Welcome" signs have been erected. This sign-posting, which is required by law, has been sadly neglected in a number of counties in the State.

—GOOD ROADS CONVENTION, GREENSBORO, APRIL 18-23—

Alabama's bond election, voting to issue \$25,000,000 for highway improvement, has been declared illegal by the Supreme Court because the Governor had been appointed by the Legislature to set the day for the election, whereas the constitution required the Legislature itself to set the day.

—GOOD ROADS CONVENTION, GREENSBORO, APRIL 18-23—

In order that those most interested in highway work in North Carolina may become thoroughly familiar with the new law, known as the Doughton-Connor-Bowie Act, it is published in its entirety elsewhere in this issue. It would be well to preserve this copy for reference.

Some complaint has been received from various contractors of not having received invitations to bid on Federal Aid work. This seeming oversight may be explained by the fact that no work has been advertised for the past two months pending the reorganization of the Commission.

—GOOD ROADS CONVENTION, GREENSBORO, APRIL 18-23—

"Every cloud has a silver lining." It may be some consolation to North Carolina motorists who, under the new law, will pay a tax of one cent per gallon of gasoline, to know that in France the tax is sixteen cents per gallon and that "gas" is selling slightly above one dollar per gallon.

—GOOD ROADS CONVENTION, GREENSBORO, APRIL 18-23—

Stokes.—Construction was begun on March 1st on Federal Aid Project No. 121, located between Rural Hall and Pilot Mountain, by the grading contractors, Jameson Bros., of Rocky Mount. Rogers and Shumway, of Petersburg, Va., will build the reinforced concrete bridges on the project. The work consists of grading, draining, and surfacing with topsoil the 11.6 miles of road included in the project and will cost approximately \$108,520.00.

—GOOD ROADS CONVENTION, GREENSBORO, APRIL 18-23—

Anson.—Construction was completed on Federal Aid Project No. 72, located between Polkton and the Union County line, on March 4th. The contractor for the road work was the Gibson Construction Company, of Knoxville, Tenn., while J. A. Kreis & Co., also of Knoxville, built the structures. The project is 3.9 miles in length, of topsoil type, and cost approximately \$70,471.00.

—O—

### Surfacing on Lincoln Highway

The Lincoln Highway as now laid out contains 3,305 miles from Broadway and 42nd Street, New York, to the Golden Gate, San Francisco, which is about 84 miles less than the route as it was laid out seven years ago. The Lincoln Highway Association reports that 2,853 miles of this distance has been improved, 542 miles of this having been done in 1920. This improvement, however, includes a considerable amount of grading only; in fact, about 1,880 miles, or nearly 60 per cent, consists of graded gravel, natural gravel, graded earth, natural earth, and sand.

Of the surfaced road, 422 miles is of concrete, 402 miles of bituminous macadam, 287 miles of macadam, 220 miles of brick, 78 of earth, 6 of creosoted block, and 7 of granite block.

It is reported that a total of \$31,284,520 has been spent upon the Lincoln Highway thus far, and it is hoped to add \$10,000,000 worth of construction work to the highway during 1921. During 1920, 127 miles of concrete road was built, 12 miles of bituminous macadam, 7 miles of brick, half a mile of macadam, 188 miles of gravel and 207 miles of permanent earth grade.



# Federal Aid Project No. 52 Completed

**C**ONSTRUCTION WORK on that section of the Concord-Albemarle Highway, located between the forks of the Mission and Albemarle roads, near St. Johns Church, and the Stanly County line, was completed on March 22d and the road is now open to traffic throughout its entire length.

Beginning approximately three and one quarter miles from Concord the project, officially designated as No. 52, extends for a distance of 8.99 miles in an easterly direction to the Stanly County line. On the west it connects with a topsoil road built by Cabarrus County and on the east with another topsoil road built by Stanly County, leading into Albemarle.

While local traffic will be more directly benefited by this improved highway, through traffic will also be served inasmuch as an outlet into South Carolina and Georgia by way of Albemarle and Wadesboro is afforded from the Central Highway at Concord. This is a means of egress which is much needed by this portion of the State and one which heretofore has not been used, due to the character and condition of the old road along

this route. Prior to the construction of Federal Aid Project No. 52 the old road, which of necessity was travelled, was a rough unimproved earth road with excessively heavy grades, poorly drained, which during the winter season was absolutely impassable to motor traffic. The new highway, as constructed, consists of a well graded roadway, 30 feet wide between ditches,

18 feet of which is surfaced with topsoil, an abundance of this material of excellent quality being available along the route. All of the structures of any size are of reinforced concrete construction designed to ac-

comodate any traffic which will pass over them. A view of the 40-foot span reinforced concrete deck girder bridge over Adams Creek is shown on this page.

The photograph at the beginning of this article

shows one of the revisions of the old road which results in better alignment, a more satisfactory grade, and the replacement of an unsafe steel bridge with a modern structure of reinforced concrete, which will safely take care of all traffic to which it will be subjected for many years.

The grading and surfacing work on this project was

done by the Gibson Construction Company, of Knoxville, Tenn., a firm which has very satisfactorily carried out several contracts on Federal Aid Projects and who are at present doing work on several projects throughout the State. An idea of the appearance of the finished road may be gained from the photograph



REVISION OF ALIGNMENT, PROJECT NO. 52, SHOWING OLD AND NEW BRIDGES OVER BUFFALO CREEK



REINFORCED CONCRETE BRIDGE OVER ADAMS CREEK PROJECT NO. 52

on the cover. J. E. Lane & Company, of Altavista, Va., were the contractors for the bridges on the project.

Including ten per cent added for engineering and contingencies, the project will cost approximately \$162,400. The project was constructed under the supervision of John D. Waldrop, division engineer, second division, in direct charge of G. C. McGimsey, resident engineer.





**Newly Appointed State Highway Commission of North Carolina**

READING LEFT TO RIGHT. Standing: John Sprunt Hill, Durham, Fourth District; Wm. A. Hart, Tarboro, First District; J. Elwood Cox, High Point, Fifth District; Ward H. Wood, Charlotte, Sixth District; W. A. McGirt, Wilmington, Third District; J. G. Stikeleather, Asheville, Ninth District; John C. McBee, Bakersville, Eighth District; J. E. Cameron, Kinston, Second District. Seated: Frank Page, Aberdeen, Chairman; Governor Cameron Morrison, Charlotte; R. A. Daughton, Sparta, Seventh District.

## North Carolina Votes Fifty Million Dollar Road Bonds

**B**Y the provisions of the Doughton-Connor-Bowie Act, published in full in this issue, which was passed by a large majority at the last Legislature, \$50,000,000 in road bonds were authorized, not more than ten million of these bonds to be issued and sold in any one year unless justified by the progress of the work, in which event further bonds may be issued at the request of the State Highway Commission and upon the approval of the Governor and Council of State. The proceeds of the sale of these bonds will be used in "the construction of a State system of hard surfaced and other dependable roads connecting by the most practicable routes the various county seats and other principal towns of every county in the State."

The salient feature of the act and the one from which the State will reap the earliest benefit is contained in section 20, which reads:

"In assuming control of the roads constituting the State highway system, the commission shall assume as soon as practicable the maintenance and upkeep of said roads, and shall as soon as practicable organize a proper and sufficient patrol force to keep said roads in good

condition. In the event of failure to maintain said roads in good condition, upon complaint of the board of county commissioners, or road-governing body of any county, the State Highway Commission shall at once investigate such complaint, and if the same be well founded, then it shall at once order the repair and maintenance of the road complained of, and investigate the neglect of the person in charge of the road so complained of, and, if upon investigation, the person or persons in charge of the road complained of be at fault, he may promptly be discharged from the service of the commission."

Not only North Carolina but the majority of the States in the Union have realized the fallacy of "county or township maintenance." As one of the prominent highway officials in another State expressed it "There is no such thing as county maintenance. County maintenance is another name for a waste of money. \* \* \* Our experience has been that county maintenance is a failure and that the maintenance of State highways should be directly under the State Highway Department." The fact that the new act provides for the



maintenance of State highways by the State Highway Commission regardless of county lines is the most progressive step yet undertaken toward "pulling North Carolina out of the mud."

Funds for the maintenance of the State highway system will be derived from the tax levied on motor vehicles and gasoline, as provided in sections 27 to 39 inclusive.

Interest among the people of the State in the question of good roads has never before reached its present height and great things are expected of the commission which will be sworn in on April 4th. This body of men, which has been so wisely chosen by the Governor, represent some of the best all around business men to be found in North Carolina and the people have the utmost confidence in their ability to produce results.

Following the ratification of the act the Governor announced the appointment of the members of the new commission to serve from the nine districts as provided in section 4 of the act, who, together with the chairman from the State at large, will make up the State Highway Commission. These appointments were confirmed by the Senate, which was of the opinion that a strong commission, composed of some of the most capable business men of the State, had been selected, who were well qualified to disburse the fifty millions appropriated and to solve the numerous problems connected therewith.

It was indeed a signal honor to Commissioner Frank Page and an evidence of the faith of the people of the State in his ability when the bill expressly provided that he was to remain as chairman and administrative officer of the new commission. The notable progress made during the last two years under the administration of the old commission was largely due to his foresight and his broad-gauged manner of dealing with every problem connected with road building in the State.

From the first district W. A. Hart, cotton mill man and farmer, of Tarboro, was appointed; J. E. Cameron,

farmer and stock raiser, of Kinston, a member of the old commission, was reappointed to represent the second district; W. A. McGirt, of Wilmington, president of the N. C. Good Roads Association, will represent the third district; John Sprunt Hill, farmer and banker, of Durham, will be the representative from the fourth district; J. Elwood Cox, banker, of High Point, the fifth district; Word H. Wood, banker, of Charlotte, the sixth district; R. A. Doughton, farmer and banker, of Sparta, appropriately spoken of by Senator Harry Stubbs as "that Gamaliel of Democracy," will espouse the cause of the seventh district, the great northwest, the roads or lack of roads of which had more to do with stimulating sentiment for the big issue than perhaps any other one factor; the eighth district will be represented by John C. McBee, lawyer and manufacturer of Bakersville, while the interests of the ninth district will be looked after by Jas. G. Stikeleather, business man of Asheville and member of the former State Highway Commission.

At the time that this issue of the *Bulletin* comes from the press it is very probable that the new commission will have had its initial meeting since the Governor has called a meeting to convene on April 4th, at which time the members will be formally inducted into office. At this meeting, which it is expected will last several days, it is unlikely that anything but routine matters will be discussed. Commissioner Frank Page has had several different organization charts drawn up and these will be presented to the commission for discussion and the adoption of the most practicable of the various plans. Whatever scheme is adopted provision will be made for the organization of a maintenance system that should result in the upkeep in first class condition of all of the roads on the State highway system regardless of type or location, so that within a short time North Carolina will rank with any of her sister States in a thoroughly modern system of roads.

## United States Good Roads Association Meets in Greensboro, April 18-23.

FOR SOME TIME past Director-General J. A. Rountree, of the United States Good Roads Association, has been busily engaged in perfecting plans for the ninth annual convention of this association, which is to be held in Greensboro during the week of April 18-23, in connection with the convention of the Bankhead National Highway Association, and the United States Good Roads Show.

Invitations have been extended to prominent highway officials and to men and women prominent in the public life of the United States, many of which have been accepted, and a highly entertaining and instructive program is assured those who attend the convention. Sev-

eral of the States in the far west will be represented by large delegations and it is likely that the total attendance will run into large numbers.

Considerable interest is being manifested in the Good Roads Show, which will be an important and highly interesting part of the convention. Machinery of all kinds used in highway construction and maintenance will be on exhibit and it is probable that a collection of road models from the United States Bureau of Public Roads will also be displayed.

The joint convention has been given considerable publicity by the press throughout the United States and a very enthusiastic meeting is expected.



# Randolph County Project 65% Complete

**C**ONSTRUCTION work on section "A" of Federal Aid Project No. 101 has been in progress since September 30, 1920, and to date this portion of the project is approximately 65 per cent complete.



HEAVY WORK ON PROJECT NO. 101A

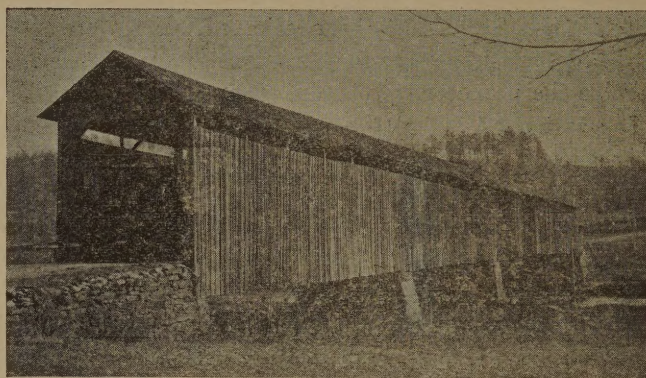
Project No. 101 is a part of the Ashboro-Graham highway, beginning at the forks of the Randleman road, about two miles north of Ashboro, and extending to the Alamance County line, near Liberty, a total distance of 19.3 miles. Section "A" of the project includes the portion between the point of beginning and Gray's Chapel, at the intersection of the Julian-Franklinville road, and is 10.03 miles in length.

The present travelled highway between the above mentioned objectives is an unimproved earth road with excessive grades and very poor alignment which, during the winter months, is impassable to motor traffic. The improvement which is now under way will provide a

afforded from the northern section to the central part of the State and several east and west routes connected. On the western end the road connects with the Greensboro-Wilmington highway at Ashboro and with the Central Highway at Graham.

S. L. Davis, of Albemarle, has the contract for grading and surfacing this section of project No. 101 and has an adequate force on the work which is making very good progress. Approximately 82 per cent of the clearing and grubbing has been completed while 60 per cent of the excavation has been done and 13 per cent of the topsoil surfacing placed.

The reinforced concrete structures, of which there are several, are being built by J. A. Kreis & Co., of Knoxville, Tenn., who are doing very good work on several Federal Aid projects in this State. The work on these

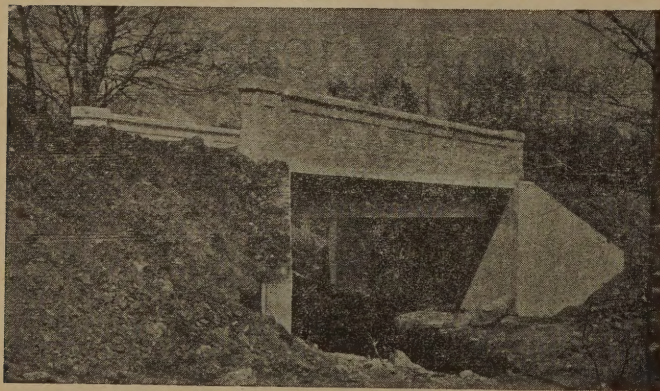


OLD COVERED BRIDGE OVER DEEP RIVER WHICH WILL BE RETAINED

Although built a number of years ago the structure is still in excellent condition.

structures is being done in a careful manner and the finish is very satisfactory. One of the bridges is shown above.

Approximately \$124,000 will be expended in the construction of the project, including both road work and bridges. W. B. Ferguson is resident engineer on the work, which is under the supervision of John D. Waldrop, division engineer with headquarters in Greensboro.



BRUSH CREEK BRIDGE, PROJECT NO. 101A

One of the bridges built on the project by J. A. Kreis & Co.

well graded and drained road, surfaced with an excellent quality of gravel and topsoil, an abundance of which is found in the county. Transportation facilities will be

## A COUNTRY WITHOUT ROADS

Newfoundland, a British colony, is said to contain very few roads since practically all of the settlements are along the shore. English capitalists are about to establish paper and pulp mills on the island and the first necessity will be to build a system of roads leading from the coast into the interior where the plants will be located.



## North Carolina's Good Road Law

(Continued from page 5)

roads are being improved or constructed and it shall be mandatory upon the said Highway Commission and its employees or contractors to place or cause to be placed explicit directions to the traveling public during repair of said highway or road under the process of construction. All expense of laying out and maintaining said detours shall be paid out of State Highway Fund.

### CLOSING OF STATE HIGHWAYS DURING CONSTRUCTION, INJURY TO BARRIERS, WARNING SIGNS, ETC.

SEC. 12. If it shall appear necessary to the State Highway Commission, its officers, or appropriate employees, to close any road or highway coming under its jurisdiction so as to permit of proper completion of work which is being performed, such commission, its officers or employees, may close, or cause to be closed, the whole or any portion of such road or highway deemed necessary to be excluded from public travel. While any such road or highway, or portion thereof, if so closed, or while any such road or highway, or portion thereof, is in process of construction or maintenance, such commission, its officers or appropriate employees, or its contractor, under authority from such commission, may erect, or cause to be erected, suitable barriers or obstructions thereon, may post, or cause to be posted, conspicuous notices to the effect that the road or highway, or portion thereof, is closed, warning signs, lights and lanterns on such road or highway, or portions thereof. When such road or highway is closed to the public or in process of construction or maintenance, as provided herein, any person who willfully breaks down, drives into new construction work, removes, injures or destroys any such barrier or barriers or obstructions on road being constructed, or tears down, removes or destroys any such notices, drives into new construction work, or extinguishes, removes, injures or destroys any such warning lights or lanterns so erected, posted or placed, shall be guilty of a misdemeanor.

### REGULATING OPENINGS, STRUCTURES, PIPES, TREES, ETC., ON THE STATE HIGHWAYS, AND THE ISSUANCE OF PERMITS

SEC. 13. No opening shall be made in any State road or highway other than streets in cities and towns, nor shall any structures be placed thereon, nor shall any structure which has been placed thereon be changed or removed except in accordance with a written permit from the State Highway Commission or its duly authorized officers, who shall exercise complete and permanent control over such roads and highways. No State road or State highway, other than streets in cities and towns, shall be dug up for laying or placing pipes, conduits, sewers, wires, railways, or other objects, and no tree or shrub in or on any State road or State highway shall be planted, trimmed, or removed, and no obstruction placed thereon, without a written permit as hereinbefore provided for, and then only in accordance with the regulations of said Highway Commission or its duly authorized officers or employees; and the work shall be under the supervision and to the satisfaction of the State Highway Commission or its officers or employees, and the entire expense of replacing the highway in as good condition as before shall be paid by the persons, firms, or corporation to whom the permit is given, or by whom the work is done; the State Highway Commission, or its duly authorized officers, may, in its discretion, before granting a permit under the provisions of this act, require the applicant to file a satisfactory bond, payable to the State of North Carolina, in such an amount as may be deemed sufficient by the State Highway Commission or its duly authorized officers, conditioned upon the proper compliance with the requirements of this act by the person, firm, or corporation

granted such permit. Any person making any opening in a State road or State highway, or placing any structure thereon, or changing or removing any structure thereon without obtaining a written permit as herein provided, or not in compliance with the terms of such permit, or otherwise violating the provisions of this act, shall be guilty of a misdemeanor: *Provided*, this section shall not apply to railroad crossings. The railroads shall keep up said crossings as now provided by law.

### TO ENCOURAGE COUNTY ROAD BUILDING

SEC. 14. To encourage counties to build hard-surfaced or other dependable roads constituting a part of the State highway system before same can be constructed by the State Highway Commission, the said commission is hereby authorized and empowered to enter into contracts and agreements with said county or counties for fair reimbursement for said expense: *Provided*, said road or bridge is built in accordance with the specifications and under the direction of the State Highway Commission.

SEC. 15. That all contracts over one thousand dollars that the commission may let for construction, or any other kinds of work necessary to carry out the provisions of this act, shall be let, after public advertising, under rules and regulations, to a responsible bidder, the right to reject any and all bids to be made and published by the State Highway Commission, being reserved to the State Highway Commission.

### TOWNS TO BEAR ONE-HALF HARD-SURFACE CONSTRUCTION

SEC. 16. That when any portion of the State highway system shall run through any city or town of more than three thousand inhabitants according to the last United States census, the streets of which in some considerable part shall have been paved or hard surfaced prior to such highway construction, and it shall be found necessary to connect the State highway system with such improved streets as may be designated as part of such system, the State Highway Commission shall bear the entire cost of constructing such connecting links, the same to be uniform in dimensions and materials with such State highways, unless such city or town shall voluntarily assume and undertake the improvement of the streets forming such connecting links according to specifications approved by the State Highway Commission. In all other cases of improving streets of cities and towns of over three thousand population embraced in the State highway system, the entire cost of construction shall be borne by the cities or towns traversed by such highways:

*Provided, however*, in extraordinary cases, or when the conditions, in the opinion of the State Highway Commission, justify it, said commission may, in its discretion, relieve any city or town of any or all of the cost of the construction of said road through said city or town, or may impose such conditions upon or make such arrangements with said city or town in connection with the construction of said road, as in its discretion may seem wise and just under all the facts and circumstances in connection therewith:

*Provided further*, that whenever any street designated as part of the State highway system shall be surfaced by order of the State Highway Commission, at the expense, in whole or in part, of a city or town, it shall be lawful for the governing body of such city or town to declare an assessment district as to the street to be improved, without petition by the owners of property abutting thereon, and to charge the proportionate cost thereof to such property.

Notice shall be given such incorporated cities or towns by the State Highway Commission of hard-surfacing work to be done within their corporate limits, and on streets that are links in the State highway system, and said notice shall also



set forth a reasonable time limit as to when said work shall be completed: *Provided*, that if said city or town fails to do work, or fails to complete same within the time specified, or within the requirements of the State Highway Commission, then it shall be the duty of the State Highway Commission to take over said work, charging all expenses incurred therefor, which are properly chargeable under this section, to said city or town; subject, however, to the foregoing provisos and conditions.

#### WORKING OF STATE CONVICTS

SEC. 17. That all able-bodied male convicts sentenced to the State Prison may be assigned to work upon the State highway system under the direction of the State Highway Commission. That the cost or hire of the able-bodied male convicts to the State Highway Commission shall be agreed upon between the State Highway Commission and the Governor and chairman of the Prison Board, on the basis of paying the actual expenses in working said convicts, including food, clothing, housing, guarding, transportation and incidental expenses by the State Highway Commission to the State Prison Board.

#### WORKING OF COUNTY CONVICTS

SEC. 18. That the State Highway Commission may make contracts and agreements with the board of county commissioners or road-governing bodies of any county in the State for the purpose of hiring any county convicts to be worked on the State highway system or in the production of materials for use in constructing State highways, and for constructing State highways.

#### GRADE CROSSINGS

SEC. 19. The State Highway Commission shall use every endeavor to avoid grade crossings on railroads, and shall either go under or over the railroad tracks when practicable: *Provided*, that nothing in this act shall in any manner release any railroad from its just proportion of the expense incident to eliminating grade crossings or to give railroads the power to force the State Highway Commission to eliminate grade crossings when in the judgment of the said Highway Commission the elimination of grade crossings is not practicable.

#### MAINTENANCE, UPKEEP, AND CONTROL

SEC. 20. In assuming control of the roads constituting the State highway system, the commission shall assume as soon as practicable the maintenance and upkeep of said roads, and shall as soon as practicable organize a proper and sufficient patrol force to keep said roads in good condition. In the event of failure to maintain said roads in good condition, upon complaint of the board of county commissioners, or road-governing body of any county, the State Highway Commission shall at once investigate such complaint, and if the same be well founded, then it shall at once order the repair and maintenance of the road complained of, and investigate the neglect of the person in charge of the road so complained of, and, if upon investigation the person or persons in charge of the road complained of be at fault, he may promptly be discharged from the service of the commission.

#### EMPLOYMENT OF COUNSEL

SEC. 21. The State Highway Commission may in its discretion employ any attorney or attorneys to advise them for the purpose of condemning land acquired by this act, making any contracts, and do other legal work that the commission may

believe necessary for carrying out this act, and compensation for all such services shall be paid out of the State Highway Fund.

SEC. 22. The State Highway Commission is vested with the power to acquire such rights of way and title to such land, gravel, gravel beds, or bars, sand, sand beds or bars, rock, stone, boulders, quarries, or quarry beds, lime, or other earth or mineral deposits or formations, and such standing timber as it may deem necessary and suitable for road construction, maintenance, and repair, and the necessary approaches and ways through, and a sufficient amount of land surrounding and adjacent thereto, as it may determine to enable it to properly prosecute the work, either by purchase, donation, or condemnation, in the manner hereinafter set out: *Provided*, that the right of condemnation provided for in this act shall not apply to gravel beds or bars, sand beds or bars, rock, stone, boulders, quarries or quarry beds, lime or other earth, or mineral deposits or formations, in actual bona fide operation by private enterprise. The State Highway Commission is also vested with the power to acquire such additional land alongside of the rights of way or roads as in its opinion may be necessary and proper for the protection of the roads and roadways, and such additional area as may be necessary as by it determined for approaches to and from such material and other requisite area as may be desired by it for working purposes.

Whenever the State Highway Commission and the owner or owners of the lands, materials, and timber required by the State Highway Commission to carry on the work as herein provided for, are unable to agree as to the price thereof, the State Highway Commission is hereby vested with the power to condemn the lands, materials, and timber, and in so doing the ways, means, methods, and procedure of chapter thirty-three of the Consolidated Statutes of North Carolina, entitled "Eminent Domain," shall be used by it as near as the same is suitable for the purposes of this act.

In case condemnation shall become necessary the State Highway Commission is authorized to enter the lands and take possession of the same, and also take possession of such materials and timber as is required by it prior to bringing the proceeding for condemnation, and prior to the payment of the money for the said property.

In the event the owner or owners shall appeal from the report of the commissioners, it shall not be necessary for the State Highway Commission to deposit the money assessed with the clerk, but it may proceed and use the property to be condemned until the final determination of the action.

#### REPORTS TO THE STATE

SEC. 23. The Highway Commission shall, on or before the tenth day of the convening of each regular session of the General Assembly of North Carolina, make full printed, detailed report to the General Assembly, showing the construction and maintenance work and the cost of the same, receipts of license fees, and disbursements of the commission, and such other data as may be of interest in connection with the work of the Highway Commission. A full account of each road project shall be kept by and under the direction of the Highway Commission or its representatives, to ascertain at any time the expenditures and the liabilities against all projects; also records of contracts and force account work. The account records, together with all supporting documents, shall be open at all times to the inspection of the Governor or road authorities of any county, or their authorized representatives, and copies thereof shall be furnished such officials upon request.

SEC. 24. That the books and accounts of the Highway Commission shall be audited at least once a year by a certified public accountant to be designated by the Auditor of the State, and report of certified accountant shall be made a part



of the accompanying report of the State Highway Commission to the General Assembly as herein provided.

#### CONSTRUCTION DISTRICTS

SEC. 25. That with the special view of an equitable distribution of the construction funds throughout all portions of the State, the State shall be divided into nine (9) construction districts, the same being designated and indicated on the map hereto attached to this act, and work in each of the construction districts shall be started as simultaneously as practicable and continued so in each district. The commission may change, reform, and relocate the lines of said construction districts.

#### APPORTIONMENT OF FUNDS TO CONSTRUCTION DISTRICTS

SEC. 26. The State Highway Commission shall apportion among the various construction districts as nearly as possible an equal amount of the construction fund on the basis of one-third in the ratio of area of each district to the entire area of the State, one-third in the ratio of population of the districts, as determined by the last United States census, to the entire population of the State, and one-third in the ratio of the State highway mileage of the district in proportion to the total mileage of State highways.

SEC. 27. That for the purpose of carrying out the provisions of this act and provide for the maintenance and construction of the highways contemplated under this act from the funds derived from the various taxes levied under this act, there shall first be set aside the sum of two hundred and fifty thousand dollars (\$250,000) annually, or so much thereof as may be necessary to defray the expenses of the State Highway Commission. There shall next be set aside a sum annually sufficient to pay the interest on the bonds issued under this act, the remainder of said fund to be used by the Highway Commission in the maintenance of the highways taken over under the provision of this act, and to be adopted and designated by the commission as State highways under the provisions of this act; any part of the two hundred and fifty thousand dollars (\$250,000) set apart for the expenses of the commission, and any part of the balance unexpended in the payment of interest on the bonds, shall pass each year under the control of the Highway Commission and be used by it in the maintenance and construction of the State system of highways herein provided for. All funds derived from the taxes herein levied, or from the sale of the bonds herein provided for, may be used by the commission in meeting the requirements of the United States Government as to Federal aid: *Provided*, that all necessary expenses of collecting the said license or registration fees or other State highway funds hereinafter provided for, including clerical assistance, the cost of furnishing number plates and mailing same, and for such blanks, books, and other supplies as cannot be furnished by the State Printer, shall be paid for monthly by the Auditor from the revenue derived from fees or taxes that are collected, said expenses shall be approved by the Governor and Council of State, and shall not in the aggregate exceed ten per cent of the total amount collected by the Secretary of State under this act.

#### REGISTRATION, LICENSING, AND PERMIT FEES

SEC. 28. That the fees for the registration and licensing of vehicles as herein required shall be according to the following schedules:

#### RATES FOR AUTOMOBILES

24 h. p. or less.....	\$12.50 per year
Over 24 h. p., and not more than 30 h. p.....	20.00 per year
More than 30 h. p., and less than 35 h. p.....	30.00 per year
35 h. p. or more.....	40.00 per year

Motor vehicles used for the transportation of passengers for hire shall pay fifty per cent more than the above rates.

Horsepower shall be computed according to the N. A. C. C. formula of rating for all motor vehicles equipped with internal combustion engines. On motor vehicles operated by steam or electricity the horsepower rating shall be computed according to the rating by the manufacturer of such vehicle.

#### RATES FOR MOTOR TRUCKS

Trucks with carrying capacity less than 1,000 pounds..	\$ 12.50
1,000 pounds and under one ton.....	15.00
One ton and under two tons.....	25.00
Two tons and under three tons.....	75.00
Three tons and under four tons.....	200.00
Four tons and open.....	300.00
On all trailers, \$15 per ton carrying capacity.	

#### MOTORCYCLES

\$5 on each motorcycle, and \$5 for each motorcycle side-car.

#### DEALERS IN MOTOR VEHICLES

Registration fee and first five plates.....	\$25.00
Each additional plate .....	1.00

The fiscal year for the collection of automobile licenses shall terminate June thirtieth. The fee for licenses issued after January first of each year, and before June thirtieth, for the period ending June thirtieth, shall be one-half the annual fee.

The foregoing schedule of license fees on motor vehicles shall become effective July first, one thousand nine hundred and twenty-one, and the present schedule of license fees shall remain in force until said date. The fiscal year for the payment of said license fees shall begin July first of each year.

#### FEES TO COVER LICENSES, ETC.

SEC. 29. The foregoing fees shall be paid to the Secretary of State at the time of issuance of said registration certificates, permits, or licenses. They shall include all costs of registration, issuance of permits, licenses, and certificates, and the furnishing of registration plates, and shall be in lieu of all other State or local taxes (except ad valorem), registration, or license fees, privilege taxes, or other charges: *Provided*, however, a county, city, or town may charge a license or registration fee on motor vehicles in the sum of one dollar (\$1) per annum: *Provided further*, that no county, city, or town shall charge or collect an additional fee for the privilege of operating a motor vehicle, either as chauffeur's or driver's license: *Provided*, nothing herein shall prevent the governing authorities of any city from regulating, licensing, controlling of chauffeurs and drivers of any such car or vehicle, and charging a reasonable fee: *Provided further*, that any city or town may charge a license not to exceed fifty dollars (\$50) for any motor vehicle used in transporting persons or property for hire in lieu of all other charges, fees, and licenses now charged.

#### VIOLATION A MISDEMEANOR

SEC. 30. Any person, firm, or corporation that shall operate any motor vehicle upon any highway of the State, without license, as is required under this act, shall be guilty of a misdemeanor and fined or imprisoned in the discretion of the court. No motor or other vehicle or trailer which has a greater rated weight of both vehicle and load exceeding seven and one-half (7½) tons shall go over or be operated upon any State highway. Any person, firm, or corporation violating the provisions of this section shall be guilty of a misdemeanor.

SEC. 31. For the purpose of carrying out the provisions of this act the funds collected hereunder shall be kept by the



State Treasurer in a separate fund to be known and designated as "State Highway Fund," and all moneys directed to be paid out under this act shall be paid by the State Treasurer upon voucher issued by the State Highway Commission, and charged to the State Highway Fund.

#### GASOLINE TAX

SEC. 32. The following words, terms, and phrases in this section of this act for the purposes hereof are defined as follows:

(a) "Motor vehicles" shall include all vehicles, movable engines, or machines which are operated or propelled by combustion of gasoline, or other volatile and inflammable liquid fuels, and are operated and used for travel on the public highways.

(b) "Motor vehicle fuels" are such fuels known as gasoline, benzine, naphtha, liberty fuel, and such other volatile and inflammable liquids produced or compounded for the purpose of operating or propelling motor vehicles, except the product commonly known as kerosene oil.

(c) The term "dealer" is hereby defined as any person or corporation who has in his, its, or their possession, for sale to the consumer, any gasoline, benzine, naphtha, liberty fuel, and such other volatile or inflammable liquids produced or compounded for operating or propelling motor vehicles as herein defined for use, distribution or sale in the State.

SEC. 33. That in addition to the taxes now provided for by law, each and every dealer, as defined in this act, who is now engaged, or who may hereafter engage, in his own name or in the name of others, or in the name of his representatives or agents in this State, in the sale or distribution as dealers or distributors of motor vehicle fuel as herein defined, shall not later than the twentieth day of each calendar month, render a statement to the Secretary of State, showing all motor vehicle fuel purchased for sale and delivered during the preceding calendar month, and pay a license tax of one cent per gallon on all motor vehicle fuel so purchased as shown by such statement in the manner and within the time aforesaid: *Provided, however,* that whenever any dealer or distributor of motor vehicle fuel shall show to the satisfaction of the Secretary of State, by complying with such rules and regulations as shall be made by the Secretary of State for that purpose, that the tax hereby provided to be paid by the dealer or distributor of motor vehicle fuel as aforesaid has been voluntarily paid by the wholesale dealer, then and in that event the reports required by this act to be made by such dealer or distributor, and by the wholesale dealer, shall not be required to be made, and the dealer or distributor shall not be required to pay the tax hereby levied.

That every wholesale dealer selling any motor vehicle fuel in the State shall render to the Secretary of State every thirty days a statement of all the sales in the State, which statement shall contain the name and business address of the dealer and the date and amount of such sale. Any wholesale dealer willfully failing to comply with the provisions of this section shall be guilty of a misdemeanor and fined or imprisoned in the discretion of the court.

SEC. 34. Every dealer in motor vehicle fuel shall render to the Secretary of State, on or before the twentieth day of each month, on forms prescribed, prepared, and furnished by the Secretary of State, a sworn statement of the number of gallons of motor vehicle fuel purchased and sold to be used in motor vehicles as herein defined by him or them during the preceding calendar month, which statement shall be sworn to by one of the principal officers in the case of a domestic corporation, or by the resident general agent of a foreign corporation, by the managing agent or owner in case of a firm or association, and shall contain an itemized account of the dates and quantities of motor vehicle fuel purchased.

SEC. 35. Said license tax shall be paid on or before the twentieth day of each month to the Secretary of State, who shall receipt the dealer therefor and promptly turn over to the State Treasurer as other receipts of his office, and the State Treasurer shall place the same to the credit of the "State Highway Fund," to be expended as provided by this act.

SEC. 36. Every dealer in motor vehicle fuel shall keep a record in such form as may be prescribed by the Secretary of State of all purchases of motor vehicle fuel; such records to include copies of all invoices or bills of all such purchases, and shall at all times during the business hours of the day be subject to inspection by the Secretary of State or his deputies, or such other officers as may be duly authorized by said Secretary of State.

SEC. 37. Any dealer, association of persons, firm, or corporation violating any of the provisions of this act shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not to exceed one hundred dollars (\$100), or by imprisonment in the county jail for a period not to exceed six months, or both.

SEC. 38. If any person, firm, or corporation shall fail to pay the tax on motor vehicle fuel, due by such person, firm, or corporation under the provisions of this act, within thirty (30) days after such tax shall be due, the State Treasurer shall bring the appropriate action in the courts of the State for the recovery of such tax, and if it shall be found as a fact that such failure to pay was willful on the part of such person, firm, or corporation, judgment shall be rendered against such person, firm, or corporation for double the amount of the tax found to be due, together with cost, and the amount collected shall be placed by the State Treasurer to the "State Highway Fund." All remedies now, or which may hereafter be given by the laws of the State of North Carolina for the collection of taxes, are expressly given herein for the collection of the judgment recovered by the State Treasurer under this section.

#### BOND ISSUE FOR ROAD CONSTRUCTION

SEC. 39. That for the purpose of carrying out the provisions of this act, and of enabling the State to avail itself to the fullest extent of all Federal aid funds that are now or may become available for use in the State for road purposes, the State Treasurer is hereby authorized, empowered, and directed to issue and sell serial bonds of the State payable in not less than ten nor more than forty years from the date of issue, and aggregating not more than fifty million dollars (\$50,000,000), to be known, styled, and designated "State of North Carolina Highway Serial Bonds," said bonds to mature in annual installments or series, to be determined and fixed by the Governor and Council of State. Not more than ten million dollars (\$10,000,000) of said bonds may be issued and sold in the year one thousand nine hundred and twenty-one; and not more than ten million dollars (\$10,000,000) of said bonds may be issued and sold in the year one thousand nine hundred and twenty-two; and the balance may be issued and sold at the rate of ten million dollars (\$10,000,000) per annum: *Provided, however,* that if the progress of the work shall be such as to justify it, then, and in that event, more than ten million dollars (\$10,000,000) of the total amount herein authorized may be issued and sold in any one year at the request of the State Highway Commission, and by and with the consent of the Governor and Council of State.

SEC. 40. That all of said bonds shall bear interest at a rate to be fixed by the Governor and Council of State, but not exceeding five per cent per annum, and are to be dated the first day of January or July, as the case may be, after the ascertainment is made by the State Treasurer, as provided for in this act. Interest on said bonds shall be payable semi-annually on the first day of January and July of each and every year so long as any portion of said bonds shall remain



unpaid; and when sold and turned over to the State Treasurer all of said fund to be part of the construction fund and known as the "State Highway Fund."

SEC. 41. That all bonds authorized and issued under this act shall be coupon or registered bonds of the denomination of one hundred dollars (\$100), five hundred dollars (\$500), and one thousand dollars (\$1,000), respectively, or such other denominations as the State Treasurer may determine, and shall be signed by the Governor and the State Treasurer, and sealed with the great seal of the State. The coupons thereon may be signed by the State Treasurer alone, or he may have lithographed, engraved, or printed thereon a facsimile of his signature. The said bonds shall be in all other respects in such form as the State Treasurer may direct. The coupons after maturity shall be receivable in payment of taxes, debts, dues, licenses, fines, and demands due the State of any kind whatsoever, which shall be expressed on the face of the bonds. Before selling the bonds herein authorized to be issued, the State Treasurer shall advertise the sale and invite sealed bids in such manner as in his judgment may seem most effectual to secure the best price. He is authorized to accept bids for the entire amount of such issue to be sold in any one year, or any portion thereof, and when the conditions are equal, he shall give the preference of purchase to the citizens of North Carolina; and he is empowered to sell the bonds herein authorized in such manner as in his judgment will produce the best price, but not for less than par and accrued interest and the full faith, credit, and taxing power of the State are hereby pledged for the payment of the principal and interest of the bonds herein authorized to be issued and sold. All expenses necessarily incurred in the preparation and sale of the bonds shall be paid from the proceeds of such sale.

SEC. 42. In the event any of the bonds issued pursuant to this act shall be registered bonds, the State Treasurer shall cause such bonds or bonds to be made payable to the owner, both as to principal and interest; and the State Treasurer is authorized by rules and regulations promulgated by him to provide for the registration of such bond or bonds either in the office of the State Treasurer or at the office of some registrar or transfer agent, notice of which shall appear on the face of the bond. After registration a bond may be transferred on such register by the registered owner in person or by attorney, upon presentation to the bond registrar, accompanied by delivery of a written instrument of the transfer in a form approved by the bond registrar of the State Treasurer and executed by the registered owner. If the holder of any coupon bond shall desire to convert said coupon bond into a registered bond, such owner, upon surrender of said bond with all interest coupons attached thereto, may have issued to him a registered bond in lieu and place thereof, under rules and regulations to be promulgated by the State Treasurer, and when such coupon bond is exchanged for a registered bond, the State Treasurer shall cause the said coupon bond with all interest coupons attached to be cancelled as is otherwise provided by law for the cancellation of State bonds, and the privilege to convert said coupon bond for a registered bond shall be stated in the face of the coupon bond when issued. The State Treasurer shall not issue a registered bond in lieu and place of the coupon bond unless all the coupons not due are attached thereto.

SEC. 43. The said bonds and coupons and notes issued in anticipation of the sale of the bonds, or for the payment of the interest thereon shall be exempt from all State, county, and municipal taxation or assessments, direct or indirect, general or special, whether imposed for the purposes of general revenue or otherwise, and the interest thereon shall not be subject to taxation as for incomes, nor shall said bonds and coupons and notes issued in anticipation of sale of the bonds, or for the payment of the interest thereon, or installment of principal, be subject to taxation when constituting a part of the

surplus of any bank, trust company or other corporation.

SEC. 44. It shall be lawful for all executors, administrators, guardians, and fiduciaries generally, and all sinking fund commissioners to invest any moneys in their hands in said bonds when such investments are made.

SEC. 45. The State Treasurer, by and with the consent of the Governor and Council of State, is hereby authorized to borrow money at the lowest rate of interest obtainable, in anticipation of the sale of the bonds herein authorized, and for the purposes for which said bonds are authorized to be issued. The State Treasurer is hereby further authorized, by and with the consent of the Governor and Council of State, to borrow money at the lowest rate of interest obtainable, for the purpose of paying the interest on, or any installments of the said bonds, in the event that there are not sufficient funds in the State Treasury with which to pay said interest or installments of principal as they respectively fall due. The State Treasurer shall execute and issue notes of the State for the money so borrowed, and he is hereby authorized to renew any such notes from time to time by issuing new notes. The rate of interest, the date of payment of said notes or renewals, and all matters and details in connection with the issuance and sale thereof shall be fixed and determined by the Governor and Council of State. Such notes when issued shall be entitled to all the privileges, immunities and exemptions that the bonds authorized to be issued are entitled to. The full faith, credit, and taxing power of the State are hereby pledged for the payment of such notes as may be issued, and all interest thereon. The proceeds received from said notes, other than notes that may be issued to pay interest or installments of principal of the bonds, shall be placed by the State Treasurer in the "State Highway Fund" herein provided for. The notes issued in anticipation of the sale of the bonds shall be paid with funds derived from the sale of bonds, unless otherwise provided for by the General Assembly. The notes issued for the payment of interest shall be paid from the funds collected under this act, as herein provided for, when collected, unless otherwise provided for by the General Assembly.

#### HOW FUNDS PAID OUT

SEC. 46. The State Highway Commission, under rules and regulations established by the Commission, shall have full control over the funds in the hands of the State Treasurer known as the "State Highway Fund," and the same shall be paid out by the State Treasurer upon proper voucher of the State Highway Commission for carrying out the purposes of this act.

#### LAW TO BE PUBLISHED

SEC. 47. That the State Highway Commission, as soon as practicable after the ratification of this act, shall have carefully compiled the road laws of this State relating to the State highway system, and shall have published not exceeding 10,000 copies of said compilation to be distributed by said commission, the cost thereof to be paid out of the State Highway Fund.

SEC. 48. All contracts or agreements heretofore made or entered into by the existing Highway Commission as to location and construction of any roads or highways, or for any other purpose, shall be and remain in full force and effect and taken over by the Highway Commission provided for in this act, and all contractors who have entered into any contract with the existing Highway Commission, whether private or municipal, shall carry out such contracts so made and all rights and remedies existing under such contracts by the present Highway Commission or any contractor shall remain in full force and effect.



## STATUS OF FEDERAL AID WORK IN NORTH CAROLINA

*Projects Under Construction*

"H S" denotes any type of hard surfaced road.

"G" denotes any type of gravel, sand-clay, or topsoil road.

NO.	COUNTY	LENGTH	TYPE	APPROXIMATE COST	BEGUN	CONTRACTOR
4	Craven.....	9.46	G	\$ 21,089.23	10-12-19	County Commissioners
8	Cumberland.....	13.46	G	62,800.71	10- 1-19	County Commissioners
9	Polk.....	12.78	G	68,175.45	8-15-19	County Commissioners
13	Wayne.....	12.573	G	101,467.96	5-25-20	County Commissioners
15	Guilford.....	4.205	H S	5,441.75	9- 1-17	County Commissioners
16	Haywood.....	14.27	G	64,705.05	7-26-19	County Commissioners
17	Wilkes.....	17.6	G	101,386.08	10-15-18	County Commissioners
22B	Alamance.....	8.3	H S	290,179.36	4-21-20	Powell Paving and Construction Company
27A	Orange.....	8.235	G	53,945.73	7-23-19	W. S. & L. A. Crawford
29	Union.....	8.655	G	58,949.25	8- 1-20	County Commissioners—J. S. Stearns
33	Montgomery.....	3.72	G	15,246.71	12- 3-20	County Commissioners
34	Wayne.....		Bridge	50,798.00	10-15-19	Roanoke Bridge and Iron Works, Inc.
37	Gaston.....	10.38	H S	167,173.23	5-26-19	County Commissioners
38A	Caswell.....	6.67	G	50,907.23	9-14-20	Bolton Construction Co.
39	Union.....	12.89	G	190,208.78	4-23-20	County Commissioners—J. S. Stearns
44	Granville.....	4.57	G	51,377.43	10-20-19	T. W. Chandler—P. R. Ashby
45	Buncombe.....	7.852	H S	359,777.28	9-23-19	H. A. Wells-Asheville Const. Co.—Asheville Paving
47	Guilford.....	4.607	H S	162,689.83	9- 6-19	County Commissioners (Company)
48B	Northampton.....	2.69	G	44,749.65	10- 4-20	Porter & Peck-A. C. House
49	Lenoir.....	6.017	H S	199,872.19	2- 9-20	T. H. Gill & Company—West Construction Co.
51	Guilford.....	2.26	H S	87,603.12	9-27-20	County Commissioners
53	Lenoir.....	7.234	H S	246,838.20	7- 6-20	T. H. Gill & Company—West Construction Co.
55B	Mecklenburg.....	4.59	H S	188,445.18	11-15-20	Simmons Construction Company, Inc.
57	Rowan.....	6.75	G	72,549.27	9- 1-20	W. E. Graham—R. M. Hudson Co.
58	Johnston.....	6.018	G	69,453.50	5-20-20	P. R. Ashby
59	Columbus.....	11.025	G	106,872.26	5-12-20	County Commissioners
60	Lenoir.....	7.88	H S	259,445.25	12-23-19	T. H. Gill & Company—West Construction Co.
61A	New Hanover.....	2.186	G	83,894.91	7-12-20	C. W. Lacy (Grading Only)
62	Buncombe.....	3.43	H S	139,191.32	3-15-20	H. C. McCrary, Inc.—Asheville Construction Co.
63	Buncombe.....	3.76	H S	167,933.55	2-16-20	Allport & Alexander Construction Co.—H. C. McCrary, Inc.—Asheville Paving Company
65	Pitt.....	9.57	G	99,181.06	11-26-20	Porter & Peck
66	Haywood.....	6.18	G	85,413.95	9-15-20	O'Brien Construction Co.
67	Nash.....	8.81	H S	384,126.08	3-15-20	R. G. Lassiter—Atlantic Bridge Company
68	Sampson-Harnett.....	27.4	G	305,225.54	7-23-20	P. R. Ashby—F. L. Grant, Inc.
69	Transylvania.....	9.348	G	144,599.13	3-25-20	Allport & Alexander Construction Company
70A	Jackson.....	4.83	G	136,743.31	6-18-20	Wright & Nave
71	Durham.....	6.69	H S	319,153.39	7-27-20	State Forces
73	Nash.....	8.73	G	159,913.16	1-20-21	Porter & Boyd
74B	Stanly.....	4.92	G	63,411.26	5-10-20	County Commissioners
75	Columbus.....	7.06	G	66,605.38	12- 9-20	County Commissioners
77	Rutherford.....	2.206	H S	100,159.44	5-17-20	E. T. Belote
78A	Rutherford.....	9.64	G	88,230.71	9-23-20	Ross Brothers
78B	Rutherford.....	10.26	G	69,387.23	9-29-20	Ralph E. Oliver
80A	Montgomery.....	16.6	G	226,516.20	8- 3-20	County Commissioners
81	Pender.....	26.11	G	273,439.54	12-23-20	Porter & Boyd
82	Davidson.....	4.54	G	69,384.75	12-18-20	Heilig & Sherrill
84A	Burke-McDowell.....	8.33	G	128,193.76	7- 7-20	J. A. Kreis & Company
84B	McDowell.....	6.76	G	109,659.49	6-21-20	J. A. Kreis & Company
86A	Martin-Bertie.....	3.09	G	98,454.67	2-25-20	State Forces (Road)
90	Pamlico.....	12.03	G	127,981.78	1- 2-21	Eagle Engineering Company
91	Surry.....	10.68	G	113,805.84	2-23-20	W. E. Graham—R. W. Curtis & Company
92	Surry.....	10.83	G	133,141.03	3-16-20	W. E. Graham—R. W. Curtis & Company
93	Franklin-Warren.....	19.8	G	192,993.57	9-25-20	Chandler & Ragland—Stearns Bros.
94A	Mitchell.....	5.04	H S	160,423.45	6-22-20	Gibson Construction Company
96	Yancey.....	2.95	G	82,653.12	1- 3-21	Gibson Construction Co.
98A	Moore.....	20.53	G	259,240.38	9-10-20	J. T. Plott—J. E. Lane & Co.
99A	Chatham.....	12.65	G	126,717.70	4-15-20	T. W. Chandler—State Forces (Bridges)
99B	Chatham.....	21.82	G	259,931.59	11-19-20	J. T. Plott—Atlantic Bridge Co. (Bridges)
100	Avery.....	14.00	H S	272,089.78	10-11-20	Southern Dray Company
101A	Randolph.....	10.04	G	123,893.99	9-30-20	S. L. Davis—J. A. Kreis & Co. (Bridges)
101B	Randolph.....	9.64	G	107,928.75	11- 5-20	J. T. Plott—Hanford Bros. (Bridges)
103	Duplin.....	11.32	G	111,931.05	6-10-20	County Commissioners
105	Hoke.....	9.8	G	95,501.80	9-15-20	Jameson Brothers—George, Hankins & George
107	Madison.....	2.46	G	70,910.40	10-14-20	Southern Dray Company
109	Burke.....	3.58	G	55,191.64	7-23-20	C. E. Teague
111	Forsyth.....	12.22	G	94,447.10	8-30-20	C. B. Hester—Heilig & Sherrill
112	Caswell.....	11.93	G	147,065.71	1-21-21	J. M. Gregory—J. E. Lane & Co. (Bridges)
116	Stanly-Montgomery.....		Bridge	199,614.80	11- 3-20	Cornell-Young Company
117	Wilson.....	6.25	G	41,828.93	3- 8-21	County Commissioners—Lee J. Smith (Bridges)
120	Bladen.....	23.67	G	105,688.55	2-16-21	J. A. Marrow—P. R. Ashby (Bridges)
121	Stokes.....	11.60	G	108,519.62	3- 1-21	Jameson Bros.—Rogers & Shumway (Bridges)
125A	Alleghany.....	4.99	G	153,899.13	11-22-20	W. E. Graham
127	Wilson.....	7.63	G	49,218.95	3- 5-21	County Commissioners—Lee J. Smith (Bridges)
136	Davie.....	6.99	G	61,733.04	2-14-21	Chandler & Ragland—Hagedorn Const. Co. (Bridges)



STATUS OF FEDERAL AID WORK IN NORTH CAROLINA--*Continued**Projects Under Contract*

NO.	COUNTY	LENGTH	TYPE	APPROXIMATE COST	CONTRACTOR
41	Watauga.....	8.95	G	94,681.29	County Commissioners
61B	New Hanover.....		Bridges	104,237.73	C. W. Lacy
86B	Martin-Bertie.....		Bridges	332,308.83	Boyle-Robertson Const. Co.
129	Richmond.....	17.28	G	77,507.48	Mulligan & Roach

*Projects Completed*

NO.	COUNTY	LENGTH	TYPE	APPROXIMATE COST	COMPLETED	CONTRACTOR
1*	Mecklenburg.....		Bridge	\$ 59,224.90	9- 5-18	C. W. Requarth & Company
2*	Henderson.....	7.75	G	33,141.74	12-17-19	State Convict Labor
3*	McDowell.....	2.85	G	24,405.73	12-17-19	County Commissioners
5*	Burke.....	8.03	G	19,888.05	11- 1-19	County Commissioners
11	Lenoir.....	1.78	H S	56,893.18	1-25-21	West Construction Company
12	Wayne.....	8.62	G	26,727.98	11- 2-20	County Commissioners
14*	Halifax.....	8.01	G	19,017.83	8-20-19	State Convict Labor
18	Alexander.....	9.8	G	66,446.49	3-31-21	County Commissioners
19	Rockingham.....	8.21	G	32,759.36	11-11-19	County Commissioners
20	Yadkin.....	6.41	G	25,146.45	7-26-20	County Commissioners
21*	Person.....	7.675	G	25,911.04	3-15-20	County Commissioners
22A*	Alamance.....	1.196	H S	30,103.48	6-27-19	County Commissioners
23	Burke.....	7.68	G	42,873.90	11- 1-20	Lovelady Township Forces
24	Wake.....	4.24	H S	127,840.21	11-30-19	W. W. Boxley & Company
25	Person.....	8.175	G	101,537.51	10-20-20	County Commissioners
26	Davidson.....	8.41	G	14,115.06	10- 1-19	County Commissioners
30	Mecklinburg.....	6.304	H S	102,551.35	3-31-21	County Commissioners
31*	Buncombe.....	3.1	H S	70,174.88	10-24-19	County Commissioners
35*	Forsyth.....	1.87	H S	59,867.61	2-25-20	County Commissioners
36	Durham.....	3.46	H S	115,075.57	12-15-19	R. G. Lassiter & Company
38	Rockingham.....	10.92	G	46,809.92	9-17-20	County Commissioners
40	Union.....	4.287	G	18,434.20	12-11-20	County Commissioners
42	Stanly.....	11.67	G	80,922.15	9-10-20	Gibson Construction Company
43	Beaufort.....	2.2	H S	95,089.12	5-11-20	Simmons Construction Company
48A	Northampton.....	5.804	G	60,620.51	10-30-20	Virginia Contracting Company
50	Guilford.....	2.65	H S	101,596.44	12-31-20	County Commissioners
52	Cabarrus.....	8.986	G	162,399.61	3-22-21	Gibson Construction Co.—J. E. Lane
54	Wake.....	6.811	H S	239,736.26	8-23-20	R. G. Lassiter & Company
55A	Mecklenburg.....	6.008	H S	196,899.73	12-28-20	Simmons Construction Company, Inc.
56	Forsyth.....	5.868	G	47,709.31	10-29-20	C. B. Hester-Luten Bridge Company
72	Anson.....	3.896	G	70,470.89	3- 4-21	Gibson Construction Co.—J. A. Kreis & Co.
74A	Stanly.....	2.803	G	25,537.45	8-20-20	County Commissioners
76	Cabarrus.....	1.35	H S	54,583.76	10-29-20	R. M. Hudson & Company
79	Cleveland.....	1.645	H S	67,063.64	10-30-20	Noll Construction Company
85	Davie.....	8.28	G	58,756.89	9-26-20	W. E. Graham
114	Rowan.....	2.543	H S	83,587.02	3-17-21	R. M. Hudson & Company

\*Final Settlement Made With Federal Government

*Summary*

	NO. OF PROJECTS	TYPE	MILEAGE	APPROXIMATE TOTAL COST
Under Construction.....	17	H S	107.27	\$3,510,542.40
	55	G	560.35	5,966,362.01
	2	Bridge	.....	250,412.80
Total	74		667.62	\$9,727,317.21
Under Contract.....	2	H S	.....	\$ 172,178.77
	2	G	26.23	436,546.56
		Bridge	.....	
Total	4		26.23	\$ 608,725.33
Completed.....	14	H S	45.16	\$1,401,062.25
	21	G	154.14	1,003,632.97
	1	Bridge	.....	59,224.90
Total	36		199.30	\$2,463,920.12



## North Carolina's Good Road Law

(Continued from page 15)

### MALFEASANCE A FELONY

SEC. 49. Any member of the Highway Commission, or any person employed by the Highway Commission in connection with carrying on the work outlined in this act, who shall knowingly, or fraudently, perform any act with intent to injure the State, or any contractor, or his agent or employee, who shall conspire with a member of the Highway Commission or employee thereof or any State official to permit a violation of the contract or contractor with intent to injure the State, or any agent or employee of any contractor who shall do any work on any State highway in violation of contract, and with intent to defraud the State, and the member of the State Highway Commission employee or State official so conspiring shall each be guilty of a felony and upon conviction thereof, shall be confined in the State Prison not less than one year and not more than five years, and be liable to the State in a civil action instituted by the State on relation of the State Highway Commission, for double the amount the State may have lost by reason thereof.

SEC. 50. The board of county commissioners or other road-governing bodies of the various counties in the State are hereby relieved of all responsibility or liability for the upkeep or maintenance of any of the roads or bridges thereon

constituting the State highway system, after the same shall have been taken over, and the control thereof assumed by the State Highway Commission, and the State Highway Commission, both as a commission and the individual members thereof, shall not be liable for any damage sustained by any person, firm, or corporation on the said State highway system, except for wanton and corrupt negligence.

SEC. 51. That if any provision of this act shall be declared by the courts unconstitutional, such declaration shall not affect the validity of any of the remaining provisions of this act.

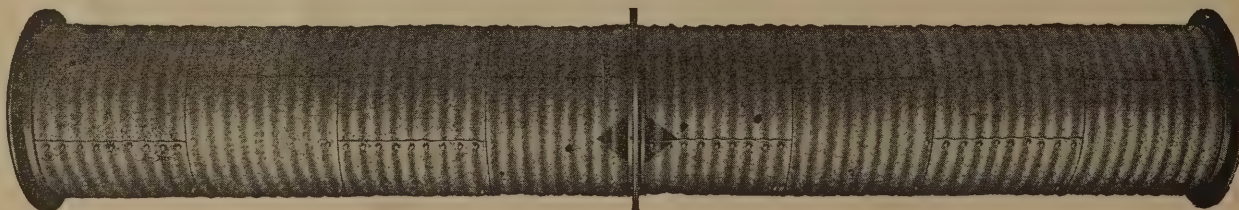
SEC. 52. All laws and clauses of laws in conflict with the provisions of this act, except chapter 64 of the Public Laws of the Extra Session of the General Assembly of nineteen twenty, are to the extent of such conflict hereby repealed.

SEC. 53. Until the organization of the State Highway Commission provided for in this act the present existing State Highway Commission shall continue in effect and be authorized to act pursuant to chapter 189, Public Laws of nineteen nineteen and all other laws in force at this time relating to the State Highway Commission, and to enter into contracts, which, together with all existing contracts, shall be taken over by the State Highway Commission created by this act, and in all other respects this act shall be in force from and after the date of its ratification.

Ratified this the 3d day of March, A.D. 1921.

## SOUTHERN METAL CULVERT COMPANY

SALISBURY, N. C.



Corrugated Galvanized Metal Culvert Pipes  
in Sizes 12 to 36 Inches, Any Length

"QUALITY AND SERVICE" ARE OUR WATCHWORDS. WHEN YOU NEED  
CULVERTS, WRITE US. WE SOLICIT YOUR BUSINESS

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## BRIDGES *and* BUILDINGS

Immediate Shipments

CONCRETE  
REINFORCING BARS

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*Write for complete information  
and estimates*

## CHEAPER THAN FORM LUMBER FOR CONCRETE CULVERTS — AND MORE EASILY REMOVED!

HIGHWAY DEPARTMENT  
MONROE COUNTY  
MISSOURI

August 7th, 1919  
Storms Manufacturing Co.,  
Crawfordsville, Ind.  
Gentlemen:—

We have given the No. 2  
collapsible culvert frames a  
thorough trial and find it  
does just what you claim  
for it.

Find herewith county  
warrant for the price of the  
frames and I also wish you to  
ship us one more set of No. 2  
frames and two sets of No. 1 frames.  
Ship same to me at Paris, Mo., at  
your earliest convenience.

Yours truly,

*Just Tringle, Hb.*

### IF YOU'RE INTERESTED IN CULVERT BUILDING

read this engineer's letter. On Missouri, New  
York, Ohio, Texas and Michigan road work  
they are saving time, labor and expense by  
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### Storms 1-Man Collapsible Culvert Frame

Engineers find that STORM Frames can be set in place  
in far less time than wooden forms can be built—and re-  
moved in a fraction of the time it takes to tear out form  
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verts with STORMS Frames. New illustrated folder  
shows every step. Ask TODAY for folder "FO."

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### IT'S SO SIMPLE

to build a culvert with Storms Frames. They never come apart—just collapse. You set the frames in position, put your lumber around them and pour your concrete. To remove, a pull collapses them and out they come! Not half the work of building lumber forms and ripping them out.

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Steel and Concrete Bridges*

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## Famous Rock Asphalt Road to Be Extended

The Kentucky Rock Asphalt section of the famous road to Camp Knox (Louisville, Ky.) is being extended this year a distance of 11 miles.

This road has attracted nation-wide interest because of the remarkable test which it has passed successfully. During the war it carried 4,000 vehicles a day—most of them heavy Army trucks running between Camp Knox and Louisville.

This traffic was estimated equal to fifteen years normal service. Army camp traffic, in most instances, literally ground the best roads to pieces.

Yet the Kentucky Rock Asphalt section of the Camp Knox road is in excellent condition today—there is not even a crack in its surface.

After this remarkable showing there was no question but that the extension of the Camp Knox road would be surfaced with Kentucky Rock Asphalt.

In laying the extension the old macadam base will be preserved, making an excellent foundation for the natural rock asphalt. This means a first-class road at a considerable saving to the tax-payers.

## BEST ROAD AT LEAST COST

Kentucky Rock Asphalt gives a sheet asphalt surface superior in many ways to the ordinary mixed types which have given remarkable service under heavy traffic in cities.

It is Nature's own paving material—hard silica sand and pure bitumen thoroughly mixed in a process requiring thousands of years.

Kentucky Rock Asphalt comes ready mixed, ready to be laid cold on any good base by ordinary unskilled labor.

Kentucky Rock Asphalt builds the highest type of roadway at a reasonable cost.

Write for our booklet, "The Road to Camp Knox."

## KENTUCKY ROCK ASPHALT COMPANY

Marion E. Taylor Bldg.

INCORPORATED

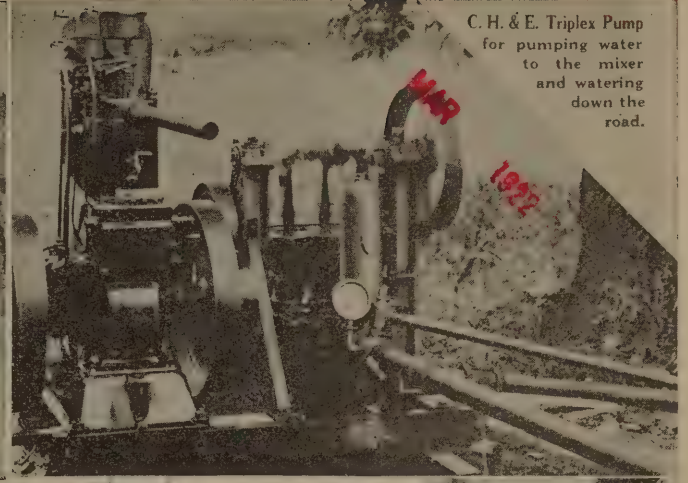
LOUISVILLE, KY.



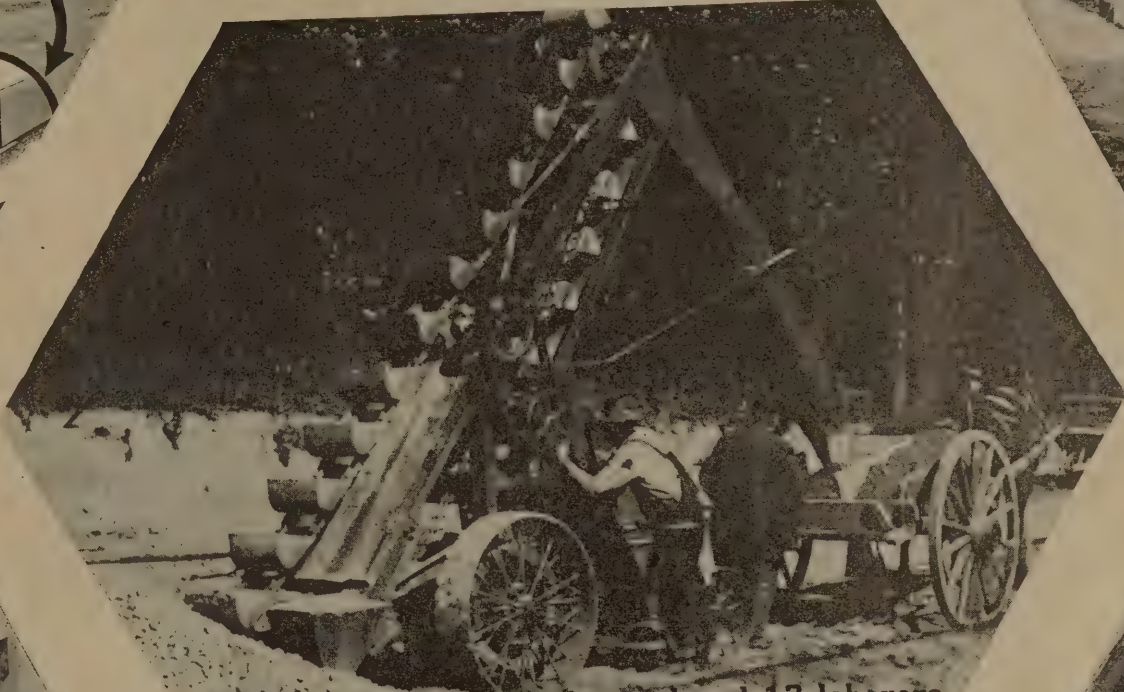
**HELTZEL STEEL  
ROAD FORMS  
"BUILT LIKE A  
RAIL ROAD"**



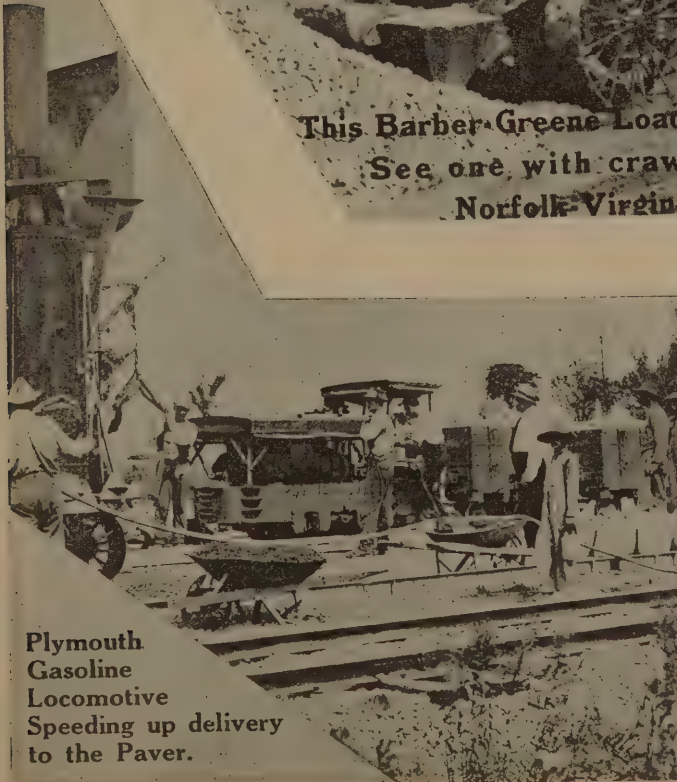
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for pumping water  
to the mixer  
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down the  
road.



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See one with crawler traction on the  
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Gasoline  
Locomotive  
Speeding up delivery  
to the Paver.**



**BYERS  
"AUTO CRANE"**  
loading gravel into  
dump truck using  
Mayard bucket.



# **\$12½** A RUSSELL ROAD MACHINE FOR EVERY NEED

Before deciding upon a road machine let us assist you by suggesting what we consider best for your requirements. We make this offer because we know that this is one of your problems. The first thing to decide upon is whether you want a machine for construction or maintenance; for horse power or tractor power.

*For Construction* buy the largest machine for which power is available. The *Russell Mogul* with a 12-foot blade and a 25-horse power tractor will construct your roads most economically.

The *Russell Reliance*, with a 10-foot blade, ranks next to the Mogul. With this machine we suggest at least a 20-horse power tractor.

The *Russell Special* is a combination machine for which you may use a 15-horse power tractor or 8 or 12 horses. It is equipped with an 8-foot blade and is often preferable over the Standard for use with animal power in stony or stumpy soil.

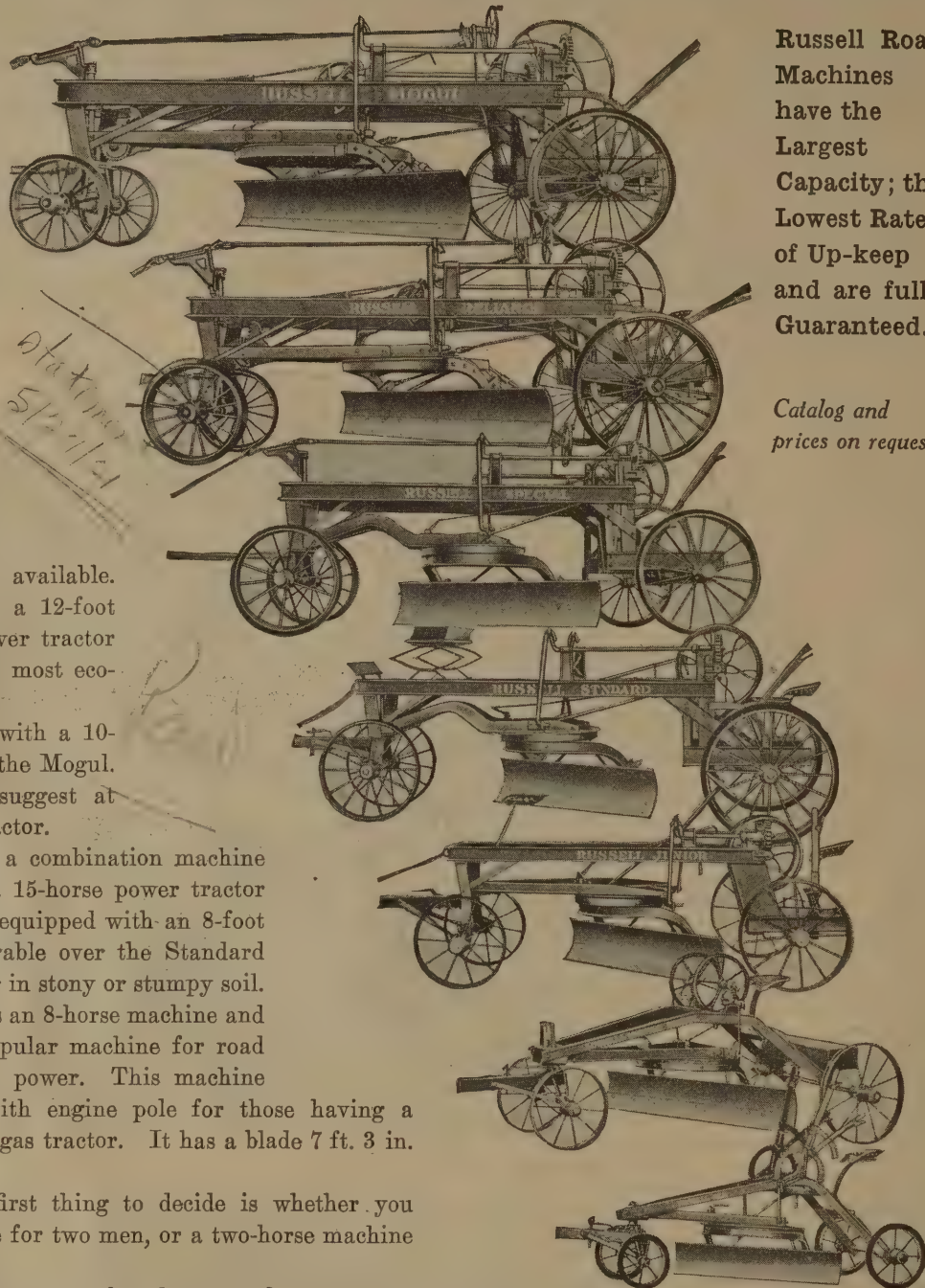
The *Russell Standard* is an 8-horse machine and is, no doubt, the most popular machine for road construction with animal power. This machine may also be equipped with engine pole for those having a small 8 to 15-horse power gas tractor. It has a blade 7 ft. 3 in. long.

*For Maintenance* the first thing to decide is whether you want a four-horse machine for two men, or a two-horse machine for one man.

For those who are willing to put four horses and two men on the grader, the *Russell Junior* will do maintaining work more effectively than any other grader. This machine has a 6-foot blade and may be used for light road construction as well as maintenance.

The *Russell Hi-Way Patrol* grader is built especially for greatest efficiency in patrol and maintenance work with two horses and one man. It is lighter than the Junior and is equipped with a 6-foot blade. Blade is operated by worm and gear lift, giving the finest kind of adjustment.

The *Russell Gem* is the cheapest of the high-framed type machines. It is equipped with 5-foot, one-piece, reversible blade. The blade is operated by lever. It is a one-man, two-horse machine.



**Russell Road Machines have the Largest Capacity; the Lowest Rate of Up-keep and are fully Guaranteed.**

*Catalog and prices on request.*

**E. F. CRAVEN,** "THE ROAD MACHINERY MAN"  
STATE DISTRIBUTOR GREENSBORO, NORTH CAROLINA  
COMPLETE LINE OF MACHINES AND REPAIRS IN STOCK



**\$12½**

CONTRACTORS' EQUIPMENT      DISTRIBUTOR OF BEST "TRACKLAYER" TRACTORS  
ROAD BUILDING AND MUNICIPAL MACHINERY      COUNTY SUPPLIES

# E. F. CRAVEN, "*The Road Machinery Man*"

GREENSBORO, N. C.

## INVITATION TO GOOD ROADS SHOW

TO OUR FRIENDS AND CUSTOMERS:—

We wish to extend to you a cordial invitation to visit the United States Good Roads Show which holds its ninth annual meeting in Greensboro the week of April 18th to 23rd, 1921.

We have planned to have on exhibition at the Show some equipment, our booths being right near the entrance as you come in through the front door of the Show. Someone will be in the booth all the time the Show is open and we want you to use us in any way you feel the liberty to do. It will be a pleasure to have you have your mail, telegrams, or long distance telephone calls sent care of our booth at the Show and it will receive our best attention.

We have had an individual telephone installed and we expect our friends visiting the Show to have the use of this telephone for local calls, and we will collect for the long distance calls and remit to the telephone people. We have had this telephone installed in our booth for your convenience and will expect you to use it.

In addition to the exhibit we have at the Road Show we invite you to visit our warehouse, 513 South Eugene Street. The announcement below gives as accurate direction of how to find our place as we can give, but when you call at the booth you will be shown the way to our office and warehouse.

Trusting you will be able to attend this convention which I am sure will be both pleasant and profitable to you, I beg to remain,

Yours very truly,

E. F. CRAVEN, "*The Road Machinery Man*"

## ANNOUNCEMENT

It gives me great pleasure to announce that we have moved into our own building which we have endeavored to build suitable for the handling of road machinery, trucks, and tractors; and I assure you we will be very glad indeed to have you come and see us and to inspect our new building, located at 513 South Eugene Street.

This location is on the main line of the Southern Railway, at the south of the passenger station, from which you can see a new three-story building which is our new home. To reach our office from the passenger station, or the hotels and business part of town, you go west on Buchanan Street to the McGlamery Auto Company building, the new Greensboro home of the Fords, follow west on Walker Avenue to the first street intersection, and turn south in Eugene Street towards the main line of the Southern and you will enter directly into our place of business.

Assuring you of our hearty appreciation of your past favors, and soliciting the continuance of your best wishes and future business, I beg to remain,

Very respectfully,

E. F. CRAVEN, "*The Road Machinery Man*"



\$ 100 #2007  
**"CATERPILLAR"**

## TRACTORS

State Highway Department records show that approximately 75 per cent of the dirt moved in road construction is handled with wheel scrapers. Doing this work with teams is slow and expensive. "Caterpillar" Tractors meet every requirement.

Contractors and road builders everywhere have found that with the "Caterpillar" method they can move more dirt per day, per month, or per job, at the lowest possible cost.

MAR 1922

Statement 5/27/21 \$102.00  
 Paid 7/13/21

Clay, Kentucky,

February 4, 1921.

"Using a 5-ton "Caterpillar" and wheel scrapers we have reduced our labor and practically eliminated teams from the job. We use 5-tons each with 2 Maney Wheelers and with this outfit our daily average is 550 cubic yards — average haul 300 to 500 feet.

We believe this the most modern method for moving dirt.

Our repairs for the year cost us less than \$3.00."

(Signed)

TOWNSEND, MITCHELL & CARTER.

**"CATERPILLAR"**

Tractors not only furnish the power and traction necessary for every phase of road building, but have built into them those features which years of experience have proven will provide continuous, economical operation. Bulletin C-159 contains cost data and other valuable information on dirt moving. Send for it today.

## Tractor & Machinery Sales Co.

DISTRIBUTORS

"Caterpillar" Tractors

Baker-Maney Wheelers

Austin-Western Line Road Machinery

P. O. Box 1165, ASHEVILLE, N. C.

1631 W. Broad St., RICHMOND, VA.

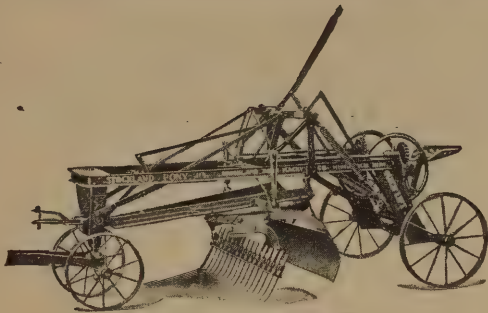


LOADING SCRAPER TRAINS REQUIRES POWER PLUS TRACTION



# APPIAN MACHINERY & SUPPLY CO.

## DANVILLE, VIRGINIA



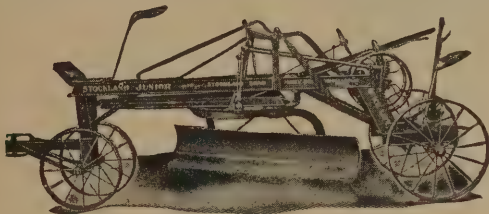
Q. L. Pony Patrol 1000 lbs.

### Functioning Features Not Frills and Fiddlements

and our natural curiosity about an ingenious toy. Many errors in judgment are simply due to enthusiasm and optimism and we ought to be thankful for it. It is a sad state of life when we can't enjoy seeing a toy monkey climbing a string; but the hard realities of

### Road Building and Maintenance

demand that we put away the frills and fiddlements of the everlasting boy in us and consider only functioning features.



Q. L. Junior 1550 lbs..

*There's a Culvert !*

*There's a Grade Crossing !!*

*There's a Boulder !!!*

*There's a Turn-About !!!!*

**LIFT IT QUICK !—!**

and it can't be done except with a Stockland. Other road graders may stand on their noses, climb trees, roll over and sit up and beg, but who wants a grader to do such things. You are interested in saving the hour or so a day starting and stopping the ordinary grader. That's what puts money in your pocket. That is the



Q. L. Standard 3100 lbs.

Functioning Feature not measured in terms of play-ball thrills, but in the cold metallic clink of dollars and cents.

A nice card case and memorandum book will be sent on return of this coupon completely filled out.

CHECK CLASSIFICATION

STATE ( ) COUNTY ( ) TOWNSHIP ( ) CITY ( )

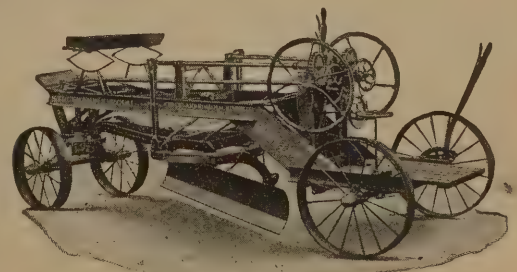
Firm of ..... will buy ( ) Road

Graders about ..... Who does the buying.....

Address ..... Office.....

How many and what Graders now used.....

Sent in by ..... Address.....



Q. L. Engine Special 3900 lbs.



# *“EVERYTHING FOR THE ROAD-MAKER”*

---

## Do You Believe in *Permanent Roads?*

— USE —

### CHAMPION ROCK CRUSHERS

*Portable and Stationary — 8 to 150 yards capacity per hour*

### MONARCH ROAD ROLLERS

*King of Road Rollers*

### MACADAM ROAD ROLLERS

### TANDEM ROAD ROLLERS

---

*TELL US YOUR NEEDS—WE WILL DO THE REST*

Yours for Service,

 **Good Roads Machinery Co.**

(Incorporated)

567-569 Whitehall Street (Phone Main 5491)

ATLANTA, GA.

---

SALES AGENTS:

North State Culvert & Machinery Co., P. O. Box 166, Greensboro, N. C.



NORTH STATE CULVERT  
*and* MACHINERY COMPANY

217 Lewis Street

TELEPHONE 2933

*Postoffice Box 166*

Greensboro, North Carolina

GENERAL LINE OF ROAD BUILDING  
MACHINERY, CONTRACTORS' EQUIP-  
MENT AND CULVERTS. A NEW  
NORTH STATE FIRM BUT OLD IN  
EXPERIENCE IN SUPPLYING WHAT  
YOU WANT.

LET US KNOW YOUR WANTS





## PURE IRON LASTS LIKE THIS

Pure iron nails from coffin of soldier buried at Fort St. Clair, Ohio, U. S. A. After being 100 years in the ground, they are practically undamaged by rust. Analysis shows them to be 99.83% pure iron, containing only the merest traces of carbon, copper and sulphur.



The Engineer of the Atlanta Terminal Company says that the Armco Culvert pictured here is in such good condition today that it ought to last several times the ten year period during which it has already withstood the acid waters which go thru it in the Railroad yards, as well as the pounding of the 450,000 heavy trains which have gone over it.



### THE DIXIE CULVERT AND METAL COMPANY

Little Rock, Ark.

ATLANTA, GA.

Jacksonville, Fla.

J. GRANVILLE BALDWIN,  
Charlotte, N. C.

W. H. McNEILL,  
Lakeview, N. C.



# E. F. CRAVEN

THE ROAD MACHINERY MAN  
GREENSBORO, N. C.

FOLLOWING ARE SOME OF THE POPULAR LINES  
THAT I CARRY IN STOCK OR REPRESENT  
ALSO CARRY REPAIRS IN STOCK FOR EQUIPMENT I SELL

## KELLY SPRINGFIELD TRUCKS

"The Big Brother to the Railroads"

Especially adapted for county and municipal purposes

"Kellys work while others are worked upon"

## THE RUSSELL LINE OF EARTH-HANDLING MACHINERY AND ROAD-BUILDING EQUIPMENT

The most popular line on the market

## WATSON DUMPING WAGONS WATSON ASPHALT WAGONS

"Watson" Wagons were the first of their kind on the  
market, and today are more widely used  
than any other

## CONNERY TAR AND ASPHALT KETTLES AND POURING POTS

## THE WOOD STEAM AND AIR-DRIVEN ROCK DRILLS SCHRAMM COMPRESSORS AND DRILLS

## FARQUHAR ENGINES, BOILERS AND SAWMILLS

## BUFFALO-PITTS AND KELLY-SPRINGFIELD ROAD ROLLERS

## THE WONDER LINE OF CONCRETE MIXERS, PAVERS DIAPHRAGM PUMPS, HOISTS BACK FILLERS AND COMPRESSORS

"Wonder Mixers Make Money"

## WYOMING "RED-EDGE" SHOVELS LAY STREET PUSH BROOMS

## HVASS STREET CLEANING MACHINERY

## "SIDNEY" AND "WESTERN" WHEELED SCRAPERS, DRAG SCRAPERS ROOTER AND ROAD PLOWS CONCRETE BARROWS

## HOPP BROS.' CONVICT CLOTHING

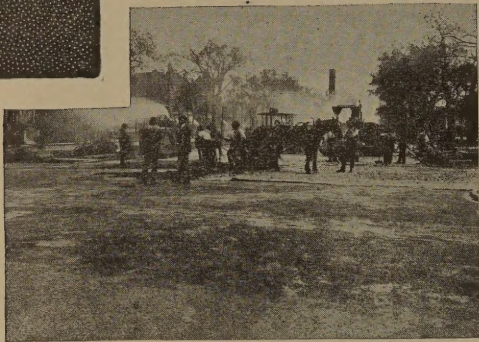
## "HERCULES" STUMP PULLERS

BLADES FOR ALL MAKES OF GRADERS CARRIED IN STOCK

All kinds of equipment and machinery for the municipality, the county, the township, and contractor.  
Your inquiries are courteously solicited. Prices and information promptly and cheerfully furnished.



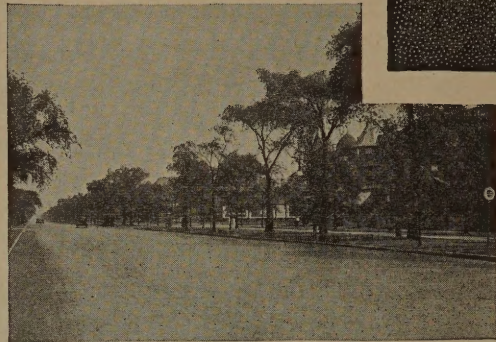
# CHICAGO



**TEXACO Asphaltic Concrete being laid on Grand Boulevard, Chicago, Illinois, in 1912.**

This is what the Chief Engineer of the South Park Commission, Chicago, wrote to the Mayor of Trenton, New Jersey, about **TEXACO ASPHALT**:

"Have laid many thousands of square yards of **TEXACO** with very satisfactory results and consider same one of the highest grade asphalts on the market."



**Finished TEXACO Asphaltic Concrete pavement on Grand Boulevard, Chicago, Illinois.**

The excellent streets and boulevards in leading cities prove the expertness of the engineers who planned their construction.

These experienced engineers demand the highest quality of paving materials, and that is why **TEXACO ASPHALT** is used so extensively in the great cities as well as in the smaller ones!

# AND

# TEXACO



**The Texas Company**  
Asphalt Sales Dept., 17 Battery Pl., New York City



New York  
Philadelphia

Richmond  
Boston

Jacksonville  
Tampa

New Orleans  
Memphis

Chicago  
Cleveland

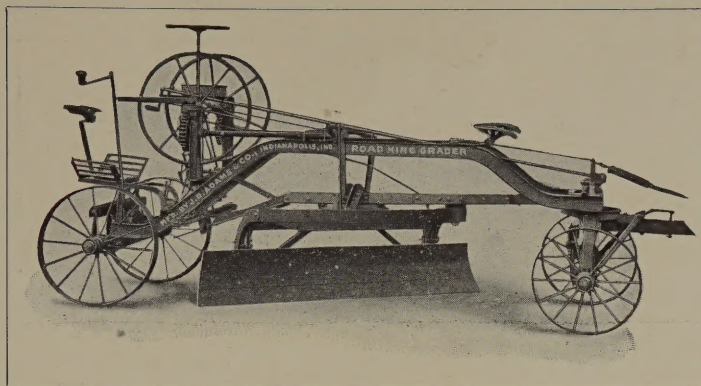
Oklahoma City  
Kansas City

Minneapolis  
Wichita

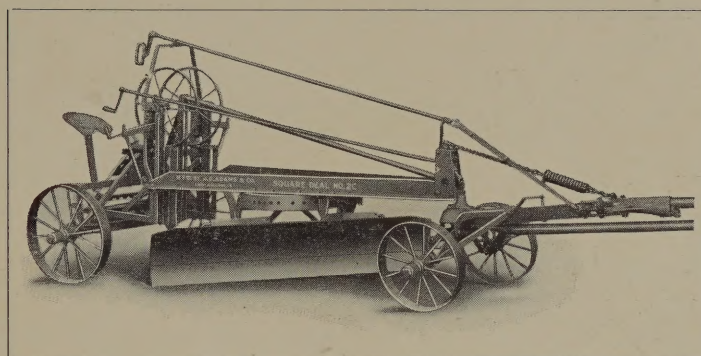
Houston  
Des Moines



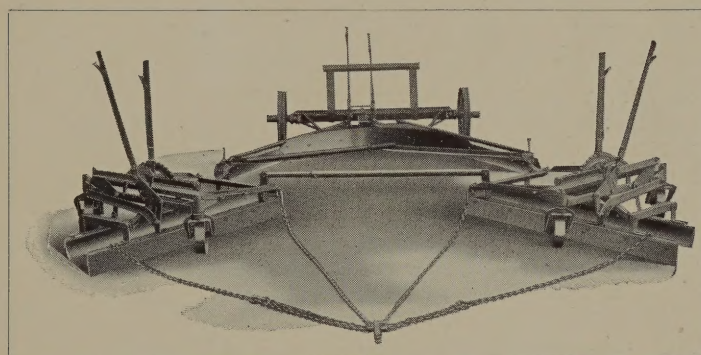
# MOST MILES OF GOOD ROADS PER DOLLAR



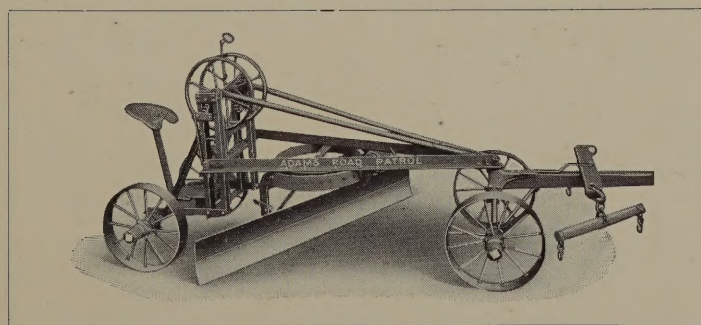
ROAD KING GRADER, 8-FOOT BLADE



SQUARE DEAL No. 2-C, 7-FOOT BLADE



ADAMS ROAD MAINTAINER



ADAMS ROAD PATROL SCRAPER

translated into working terms means Adams Road Building and Maintenance Equipment

For your road building grading use

## ADAMS ADJUSTABLE LEANING WHEEL GRADERS

that are guaranteed to do more work for you with less power and therefore less cost, than any other graders on the market. The difference is in the leaning wheels—an exclusive feature on Adams Graders.

They are built with blades ranging from 6 ft. to 12 ft. long. There's a size to suit your work that can be furnished either for animal or tractor power.

To keep your roads always smooth and properly crowned, use

## ADAMS ROAD MAINTAINER

a flexible machine which shapes both sides and crowns the center of the road in one operation, preserving the original contour of the road. Operated by one man and a truck or light tractor, it covers many miles of road a day, making the maintenance cost per mile very low. Adjustable to all road widths and conditions.

## ADAMS ROAD OR PATROL SCRAPER

a mighty popular little one-man, two-horse maintenance machine for maintaining roads by the patrol system. Thousands in use all over the country.

We also manufacture a superior line of Road Drags, Scarifiers, Scrapers, Plows, etc.

J. C. BENJAMIN, RALEIGH, N. C.  
BLAND HOTEL

J. D. ADAMS & COMPANY  
HOME OFFICE AND FACTORY  
INDIANAPOLIS, INDIANA

GET IN TOUCH WITH OUR LOCAL REPRESENTATIVE—HE IS THERE TO SERVE YOU





Above: Tank wagon spraying "Tarvia-X" under steam pressure with special Barrett nozzle.

Left: Brighton Plant, Rochester, N. Y., with loading lines for tank cars and motor trucks. Right: Tarvia Service Station at Syracuse, N. Y., completely equipped to ship in tank cars, motor trucks or barrel lots.

## Service!

**C**ALL on our Special Service Department regarding your road problems or the conditions in your vicinity. We gladly put the skill and experience of our engineers at your disposal. This service is free for the asking. If you are interested in *better roads* and *lower taxes*, here is an organization that can be of real service to you.

### Tarvia—When you want it

In road work, building or repair, nothing is more important than having material on hand *when* it is wanted. Delays and hold-ups on delivery are expensive. Tarvia Service can be depended upon. Tarvia Service is always "on the job."

### Tarvia—Where you want it

Back of Tarvia Service stands the great Barrett organization with its branches, placed all over the U. S. These branches are strategically located to afford efficient centers of distribution. You can always get Tarvia *where* you want it.

### Tarvia—How you want it

Tarvia can be delivered by tank car, motor truck, tank wagon or in barrels. As a rule, Tarvia motor truck service is available within 40 miles of any Barrett Service Station or plant. When the size of the job warrants, motor trucks may be furnished at any distance from the plant or service station, the trucks operating from tank cars placed on sidings.

Motor truck distribution is faster and well worth the slight increase in price necessary to cover the use of the trucks, but equally good results may be obtained with the tank wagon—Barrett nozzle method—as shown in small illustration above.

Simply specify *how* you want Tarvia delivered—we'll do the rest.

**T**ARVIA is a coal tar preparation made in a number of grades to meet varying road conditions. It is the most popular road material in America and has solved the problem of low cost, traffic-proof roads and pavements for hundreds of towns throughout the country.

Booklets free on request

# Tarvia

*Preserves Roads—Prevents Dust*

36th and Grey's Ferry Avenue

The *Barrett* Company

Branches in All Leading

Cities



PHILADELPHIA, PA.